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ABSTRACT

Interviews with 180 federal agencies that conduct social research and development (R&D) were conducted and documents were examined to determine: (1) what types of social R&D are supported, and what levels of support are provided; (2) who defines the problems to be researched, who decides the level of support to be provided, and how investigators are selected and monitored; and (3) how potential users are involved in research decision making, and how the research results are disseminated. Major emphasis was on social R&D in the major policy areas of income security, health, early childhood, and the living environment (i.e., policy area that encompasses the patterns of growth and change in agricultural, urban, and metropolitan areas). One central insight revealed in the agency studies, all of which are summarized in this report, is that there is an enormous diversity of practices in all areas studied. In the concluding sections of the report, key conclusions, generally critical of current practices, are discussed, and a framework in which to analyze the actions of the social R&D managers is developed. (RM)

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STUDY PROJECT ON
SOCIAL RESEARCH
AND DEVELOPMENT
VOLUME 3

Studies in the Management of Social R&D:

Selected Policy Areas

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Laurence E. Lynn, Jr., *Editor*

Study Project on Social Research and Development
Assembly of Behavioral and Social Sciences
National Research Council

NATIONAL ACADEMY OF SCIENCES
Washington, D.C. 1979

SO014707

NOTICE: The project that is the subject of this report was approved by the Governing Board of the National Research Council, whose members are drawn from the Councils of the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine. The members of the Committee responsible for the report were chosen for their special competences and with regard for appropriate balance.

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STUDY PROJECT ON SOCIAL RESEARCH AND DEVELOPMENT

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Foreword

This volume was prepared by the National Research Council for the National Science Foundation (NSF). At the request of NSF's Science and Technology Policy Office in 1974, the National Research Council agreed to undertake a study of the organization and management of social research and development throughout the federal government. To carry out this task, the Study Project on Social Research and Development was established within the Assembly of Behavioral and Social Sciences of the National Research Council.

The work of the Study Project includes six volumes, to be published in 1978–1980:

Volume 1: *The Federal Investment in Knowledge of Social Problems* (Study Project Report)
Volume 2: *The Funding of Social Knowledge Production and Application: A Survey of Federal Agencies*
Volume 3: *Studies in the Management of Social R&D: Selected Policy Areas*
Volume 4: *Studies in the Management of Social R&D: Selected Issues*
Volume 5: *Knowledge and Policy: The Uncertain Connection*
Volume 6: *The Uses of Basic Research: Case Studies in Social Science*

Acknowledgments

Throughout the course of this study I benefited from the encouragement and advice of the members of the Study Project on Social Research and Development. The design and content of the final volume is the product of a collaboration among the authors of the individual chapters. Cheryl D. Hayes and John M. Seidl especially helped me with the first and last chapters. I was also privileged to have the editorial assistance of Christine L. McShane, who did her usual outstanding job of preparing the volume for publication.

LAURENCE E. LYNN, JR.

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1 Introduction

LAURENCE E. LYNN, JR.

BACKGROUND

The Study Project on Social Research and Development (R&D) was created to address two questions: What can be done to improve the current system of federal support for social research and development? How can federal expenditures on social R&D more effectively meet the needs of society? Early in the planning for the Study Project, members decided to conduct a systematic study of how social R&D was currently managed by federal agencies. If the system was to be improved, we needed to understand how it worked and what types of changes would be likely to produce the desired results.

We were mindful that the recent history of federal research administration had been dominated by a quest for more-useful results through better management. Early in the 1970s, as part of a general interest in determining how to increase presidential control over federal agency operations, the Office of Management and Budget made a study of federal support for social R&D. Although the results were never made public, the study is understood to have reached the conclusions that: (1) wide diversity characterizes agency approaches to social R&D management; (2) significant duplication of effort exists; (3) agencies lack clearly defined missions regarding social R&D; and (4) agency programs for R&D tend to be dominated by the constituency that the agency serves. By 1973, administration views had ripened to a point at which special stress was placed on the importance of refocusing federal R&D on areas of special national need and of obtaining "a proper return" on R&D investments (see Lynn 1978, p. 3).

The urge to tighten up and focus the management of federally supported social R&D was not limited to officials in the Executive Office of the President. After a period of near quiescence in the 1950s, federal support for social R&D grew sharply but haphazardly over the next decade. In the 1970s, public officials, including many who sought knowledge to inform their policy choices, became increasingly critical of the meager payoffs from the growing expenditures to obtain knowledge from social research. Thus, whether the situation was top administration officials seeking control or departmental officials seeking useful information to use in making policy, the result was the same: pressure to reform agency management of social R&D and to adopt a variety of management measures: discouragement of grants, improved monitoring of grants and contracts, reduced emphasis on peer review, and the adoption of planning and priority-setting processes (see Lynn 1978, pp. 5-6).

Increasingly restrictive administration of social research and the general emphasis by federal officials on practical relevance encountered growing opposition in the research community. Many researchers believed that the government was making matters worse, not better, by adopting measures inimical to creative, high-quality, problem-oriented research.

In 1971 and 1972 Secretary of Health, Education, and Welfare (HEW) Elliot J. Richardson instituted numerous reforms of the department's policy planning process. As one step he issued a directive as part of his annual guidance memorandum on planning to the department requiring each agency to prepare and submit plans for research and evaluation during the budget preparation cycle. He stated in his 1972 guidance memorandum: "Evaluation and research are the major knowledge-creating activities in the Department. As such, plans for evaluation and research must maximize the return of information needed for Agency strategy and plan development."

Such a directive sounds—and indeed was—naive. As the person who drafted it—I was assistant secretary for planning and evaluation at the time—I can attest to that. The full text of the guidance was mercifully brief and general, however, a fact that suggests more sophistication. During this time, members of the HEW planning and evaluation staff at Richardson's request conducted a detailed study of how HEW agencies administered their social R&D activities. The results were revealing. Social R&D management was extraordinarily varied and decentralized, with a root structure reaching deep into the private research community, Congress, and various special interest groups. One did not change actual resource allocations simply by issuing a planning directive. We issued one anyway—one must keep up appearances—but with no illusions; we kept it short.

The lesson of that experience has informed the efforts described in this book. In responding to the mandate to recommend ways of improving the management of social R&D, my colleagues and I on the Study Project on Social Research and Development realized that we had better gain an understanding of how the world of federal social R&D actually works. There have been an abundance of naive prescriptions concerning social R&D in recent years. We felt that we faced a tougher challenge: figuring out an approach that reflected the realities of both the policy-making processes and the processes of creative research. Key intermediaries linking these two processes are federal research administrators. Because they would inevitably be the agents of change, we set out to study, in as much depth as time and resources permitted, how they actually function.

Our interest focused on the questions: Who decides how social R&D resources are allocated? On what basis are these decisions reached? If we wanted to increase the relevance to policy of federally supported social R&D, how, in the light of the answers to these questions, would we go about it?

FRAMEWORK FOR THE STUDY

The management study was conducted in accordance with the terms and definitions of social R&D used by the Study Project throughout its work. For the convenience of readers of this volume, the definitions of the knowledge production and knowledge application activities comprising social R&D, which the Study Project developed, appear below. The final report of the Study Project (National Research Council 1978) analyzes in detail federal support for social R&D and defines extensively its categories of social knowledge production and application, policy areas, and type of support.

Most of the data that appear in the tables of the four management studies in this volume were developed from the Study Project's survey of the approximately 180 federal agencies that conduct social R&D. Volume 2 of the Study Project series (Abramson 1978) describes in detail the categories of social knowledge production and application, the policy areas, and the programs of each of the 180 agencies.

The general goal of the social R&D management study was to get an accurate feel for management processes, a sense of the milieu in which

DEFINITION OF SOCIAL KNOWLEDGE PRODUCTION AND KNOWLEDGE APPLICATION ACTIVITIES

Knowledge Production

Research Research is systematic, intensive study directed toward greater knowledge or understanding of the subject studied. Social research includes basic, applied, or policy research that studies either the behavior of individuals, groups, or institutions or the effects of policies, programs, or technologies on behavior.†

Demonstrations for Policy Formulation A demonstration is a small-scale program undertaken in an operational setting for a finite period of time to test the desirability of a proposed course of action. A demonstration for policy formulation is undertaken to learn new information about the outcomes and administrative feasibility of a proposed action. Social experiments are included in this category.

***Program Evaluation** Program evaluation is evaluation that seeks to systematically analyze federal programs (or their components) to determine the extent to which they have achieved their objectives. A distinguishing factor of program evaluation is that national operating programs (or their components) are evaluated for the use of agency decision makers in making policy or program decisions. Program evaluation is defined as a management tool; more-general types of evaluation studies (activities frequently labeled evaluation research) were judged not to be oriented to management or decision making and were categorized as research.†

***General Purpose Statistics** General purpose statistics include either current or periodic data of general interest and use. A characteristic of general purpose statistics is that many of the specific users and uses are unknown. These statistics provide all levels of government and the private sector with information on a broad spectrum of social, economic, and demographic topics. Statistics that are collected for the specific purpose of providing research data in a specific area of inquiry have been categorized as research.†

***Demonstrations for Policy Implementation** A demonstration is a small-scale program undertaken in an operational setting for a finite period of time to test the desirability of a proposed course of action. A demonstration for policy implementation is undertaken to promote the use of a particular action. This type of demonstration does not attempt to generate a new information but instead attempts to apply existing knowledge.

Development of Materials The development of materials consists of the systematic use of knowledge and understanding gained from research to produce materials. Examples of such materials are educational curriculum materials or methods, testing instruments, and management or training curricula. Such materials are used in a variety of educational, training, or testing settings.†

***Dissemination** Dissemination consists of activities undertaken by research managers or others to promote the application of knowledge or data resulting from social knowledge production activities.† Dissemination activities include:

Publication and distribution of scientific and technical information resulting from social research;

Documentation, reference, and information services (information retrieval systems);

Research syntheses written for the use of practitioners and decision makers;

Technical assistance to practitioners to disseminate knowledge;

Support of conferences to disseminate information; and

Creation of dissemination networks and consortia.

*The asterisked categories fall outside the definition of research and development used by the National Science Foundation and the Office of Management and Budget. This knowledge-production and knowledge-application framework can thus be viewed as containing social R&D and related activities.

†These definitions are similar to those used by the National Science Foundation and the Office of Management and Budget. For a fuller discussion of these definitions, see the Appendix.

SOURCE: National Research Council (1978) *The Federal Investment in Knowledge of Social Problems.* Study Project Report. Study Project on Social Research and Development. Vol. 1. Washington, D.C.: National Academy of Sciences.

agency social R&D managers operate, and insights into the incentives and disincentives to which they respond. Thus the primary source of information was interviews with agency personnel.

We decided to seek three types of information: the nature of the R&D activities being supported, the decision-making process that underlies these activities, and the relationships between R&D offices and potential users of the research they support. Three particular sets of questions guided the inquiry:

- What types of social R&D are supported? What levels of support are provided?
- Who defines the problems to be researched? Who decides the level of support to be provided? How are investigators selected and monitored?
- How are potential users involved in research decision making? How are the results of research disseminated?

These questions were designed to elicit information about the determination of priorities for social R&D, the extent to which concern for relevance or ultimate use influences choices about social R&D, and the effects of particular management controls and constraints, including the availability of budgetary resources, on the management of social R&D. This information served as the basis for considering how and whether changes in the management of social R&D affect the results of investments in social R&D.

From the literature and from preliminary discussions with knowledgeable people, we gleaned a variety of conjectures concerning the management of social R&D. Several of these conjectures—those with the most salient implications for the overall study—were incorporated into the framework for the management study. That is, in addition to seeking answers to the questions described above, we sought information that would shed light on the plausibility of these conjectures. Although such a procedure threatened the integrity of the management study—case studies are vulnerable to the charge that they are self-validating—we believed that the potential gain in the study's acuity outweighed the risks. The conjectures were as follows.

- Managers of social R&D are subject to the same pressures and exhibit the same behavior as other program managers. That is, the manager of social R&D does not inhabit a world apart in which the canons of science replace self-interest or bureaucratic politics.

- The narrower and more technical the operating missions of an agency or bureau, the more communication and coordination takes place between managers of R&D and managers of programs.
- Differences in management styles or procedures for selecting and monitoring research performers are not reflected in differences in the quality or usefulness of social R&D.
- The results of social R&D that are inconsistent with the value orientation of decision makers are not likely to be used.
- Social R&D that cuts across or transcends traditional organizational boundaries is less likely to be undertaken.

THE SELECTION OF POLICY AREAS

An implication of many of the conjectures we considered in planning the study was that the social R&D activities of an agency tend to be closely aligned in scope with an agency's operating programs. Thus, far from reflecting a broad, farsighted concern with social problems, social R&D tends to fall into the same narrow, watertight compartments as do categorical operating programs. The extent to which this conjecture is true was of considerable interest and concern to the Study Project.

We therefore decided to study social R&D offices and agencies clustered by broad policy areas. The use of the term policy area in the management study differs from its use in other aspects of the Study Project's work. In the Study Project's other volumes, definitions of policy areas are based on their use by the General Accounting Office and the House Budget Committee in evaluating federal budget allocations. (For a detailed explanation, see National Research Council 1978, pp. 92-95, or Abramson 1978, pp. 22-25.) The definition of the term in the management study is derived from its purpose: a policy area is defined to encompass social R&D activities that would bear some relationship to one another in an ideal world in which policy making was based on broad, problem-oriented thinking. In an ideal world, in other words, there would be explicit or implicit relationships among separate research efforts that relate to common policy goals or target groups—or to functionally related or behaviorally related social activities. We know that departures from the ideal are the rule in the case of operating programs. By looking at social R&D activities that ought to bear some relationship to one another, we stood to gain insights into whether those concerned with knowledge production are able to overcome the centrifugal forces that affect operating programs or whether, as our conjectures implied, research follows programs, i.e., is fragmented and even inconsistent.

We defined four policy areas to investigate. These areas were designed to vary along dimensions that were of interest to the Study Project.

INCOME SECURITY This area encompasses social insurance, welfare, and employment and training programs. It is characterized by a relatively high degree of intellectual coherence, relatively weak professional identity, a history of attempts to forge policy linkages among separate governmental activities, but strong separatist tendencies both among and within cabinet agencies as far as social R&D is concerned. Moreover, social R&D activities are supported in a variety of ways, ranging from strong intramural offices to exclusively extramural efforts.

HEALTH This area encompasses programs for the financing and delivery of medical care and other activities that affect human health. It is characterized by strong professional identity and organization, with a strong core built around the medical care system, a lower but nonetheless significant degree of intellectual coherence and a greater potential for policy leadership from the secretary of health, education, and welfare and his or her assistant secretary for health and scientific affairs. Health is a growing area of national concern, with a good deal of intellectual ferment, yet is has a long and rich R&D tradition.

CHILDHOOD This area encompasses programs that directly or indirectly affect the well-being of children. It has relatively little intellectual coherence, a strong, unifying target-group orientation, several distinct professional groups, no one of which is predominant, long-standing policy traditions, and a history of recent attempts at policy and research coordination. Of the four, this area poses the most serious philosophical questions concerning the proper governmental role. (The health area also poses such questions.)

THE LIVING ENVIRONMENT This area encompasses environmental protection, transportation, land use, and other activities affecting patterns of human settlement. It has little or no intellectual coherence, no distinct professional identity, programmatic activities that are dispersed among numerous agencies and departments and that often work at cross purposes, relatively little potential for strong policy leadership, and a relatively weak and fragmented research tradition. The area is experiencing a good deal of policy ferment and fundamental tension between economic growth and development and environmental protection.

We hoped to be able to see if social R&D management practices varied in ways associated with the differences among these policy areas. If so, we stood to gain important insights into the basic influences shaping social R&D management, which would permit more-informed thought about how social R&D management might be improved.

METHOD OF INVESTIGATION

Each policy area was entrusted to one or two principal investigators. These investigators surveyed available data on social R&D activities in each policy area, including the many offices that supported such activities. Constrained by time and budget, they chose a limited number of offices to investigate in depth. Their choices were based on judgments about those offices that, individually and collectively, would be likely to yield the most revealing insights into the character of social R&D management in a particular policy area.

The judgments of individual investigators and the special characteristics of each policy area have influenced the scope and content of the studies. Thus they are not entirely alike in their treatment of the subjects. Because basic, ground-level understanding of social R&D management is so primitive, we have counted the individuality of the studies as a plus in contributing to our gaining a feel for what actually goes on. To facilitate the kinds of comparisons among policy areas that we wanted to make, however, the papers have been organized to follow a common outline.

Because the overall study is organized by policy area and not by department or agency, some offices and agencies are discussed in more than one policy area. The Office of the Assistant Secretary for Planning and Evaluation in the Department of Health, Education, and Welfare, for example, is discussed in both the health and the income security studies because it supports research in both policy areas. For the same reason, only those social R&D activities of an agency that fall under a particular policy area are included in each study. The living environment study, for example, includes only those activities of the Department of Agriculture, the Department of Housing and Urban Development, and the Department of the Interior—or of particular offices within those departments—that are encompassed by that policy area.

As noted above, the primary source of information was interviews, supplemented by documents pertaining to various aspects of social R&D management. Apart from the framework described above, the interviews were largely unstructured and had no fixed time limits. Interviews were sought with social R&D managers, members of their staffs, program officials who would stand to benefit from research findings, officials in planning and budget offices, and others inside and outside the department who would supply information and assessments of social R&D management. If considered necessary or helpful, reinterviews were conducted. Drafts of the policy area studies were circulated for comment and criticism to many of those who had been interviewed and to others who could provide helpful perspectives.

Most of the information was gathered in 1976, then checked and updated primarily in 1977. Many changes in the organization and management of social R&D have occurred since then. We have tried to note some of these changes; for example, the Social and Rehabilitation Service, which is discussed in the income security study, has since been abolished. We could not possibly keep up with and incorporate all the important changes. Moreover, the basic social R&D management milieu has not changed. Practices, incentives, and problems are basically the same. These studies and the insights they yield continue to be relevant to answering the questions addressed by the Study Project.

REFERENCES

Abramson, Mark A. (1978) *The Funding of Social Research and Development: A Survey of Federal Agencies.* Study Project on Social Research and Development, Vol. 2. Washington, D.C: National Academy of Sciences.

Lynn, Laurence E., Jr. (1978) *Knowledge and Policy: The Uncertain Connection.* Study Project on Social Research and Development, Vol. 5. Washington, D.C.: National Academy of Sciences.

National Research Council (1978) *The Federal Investment in Knowledge of Social Problems.* Study Project Report. Study Project on Social Research and Development, Vol. 1. Washington, D.C.: National Academy of Sciences.

2 Income Security

EDWARD F. LAWLOR

INTRODUCTION

OVERVIEW

Recent growth in transfer payments and pressure on public and private insurance programs have rekindled interest in federal policies for income security. In the last decade, outlays for income security and employment-related programs have increased approximately 75 percent (Pechman 1978, p. 10). Transfer payments are now the largest category of federal expenditure—1977 payments were $173 billion, more than 40 percent of the total budget (Survey of Current Business 1978). Among insurance activities, financing problems in social security and disability programs have focused attention on demographic and participation characteristics that are changing the profile of federal obligation.

Fiscal obligation, however, is only one source of changing interest in income security policy. As the prospects for reform have shifted, so have concerns about the purposes, adequacy, and performance of income security policy. In particular, program developments of the last decade are being challenged on the basis of their structural outcomes. Robert Haveman (1976, pp. 17-18) has summarized these criticisms:

NOTE: The author wishes to thank Vincent P. Rock for his work on a preliminary draft of this report. Christine L. Davis conducted many interviews and provided important research. Richard C. Davis developed materials for the agency studies in the Department of Labor.

An important characteristic of the social policy between 1965 and 1975 is the inconsistency, inefficiency, and inequality of the welfare and income maintenance programs, which were either initiated or extended during this period. As has been increasingly realized, the structure of this set of programs (sometimes generously referred to as an income-support system) has major weaknesses: (1) It is built around specific categories of people, eliminating some poor families completely. (2) A number of problems have state-determined eligibility requirements and benefit levels, and, as a result, equally poor families of the same structure may be treated quite differently depending upon where they live. (3) Because of this variance in the treatment of families, some families with able-bodied nonworking heads may end up with more disposable income than other families with full-time working heads. (4) Taken together, these programs contain incentives that discourage the work effort on the part of recipients, encouraging family break-up, and promoting migration from low- to high-benefit regions. (5) Because of the patchwork nature of the programs, there are serious administrative inefficiencies, and equally serious inefficiencies in the targeting of benefits toward the most needy family units. When held up to generally accepted principles of efficiency and equity, the social policy legacy of the 1965–1975 decade does not score well.

The outcomes of recent policy development are forcing consideration of income security issues along several dimensions. The federal income security "system" now consists of nearly 200 major programs located in a dozen departments and agencies. In this paper, federal policy on income security and program-related R&D are discussed in terms of (1) insurance programs (e.g., social security, private pensions), (2) public-assistance programs (e.g., Aid to Families with Dependent Children, food stamps), (3) employment and training programs, and (4) taxation of individuals and families. Macroeconomic research on the effects of monetary and fiscal policy, viewed by the Study Project as part of the environment of income security policy, is not explicitly included.

Insurance programs, supported by both private and public agencies, provide protection for workers and families against disruptions of income due to unemployment, disability retirement, or death. This set of programs represents the major bulk of transfer payments (U.S. Office of Management and Budget 1976). Although transfer payments under the insurance system are assumed to be related to premiums, and payments for public assistance related to need, in neither case is the relationship simple or unambiguous.

Public-assistance programs attempt to provide a minimum level of consumption for individuals or households with inadequate incomes. In some cases assistance is provided in-kind for goods and services (e.g., housing, health care) that society has determined are necessary. These programs alleviate conditions of poverty and affect the overall distribution of income.

Regular employment is the main source of income security for most individuals and families throughout much of their lives. Changes in the level of employment may have significant implications for the income transfer system. Employment and training programs reflect a relatively new approach to employment-related income security issues. Initially, in the early 1960s, the focus of these programs was on technological unemployment. Since then, the scope of employment and training programs has been extended to include disadvantaged workers generally. Employment and training policies are concerned with training, information, and incentives that will facilitate employment of disadvantaged people. In addition, efforts are increasing to improve the functioning of the labor markets and to correct for characteristics of jobs in the so-called secondary market. Changing the nature of work is viewed by some (Bell 1975, p. 109) as a way of reducing the requirements for income transfers based on need.

The primary objective of tax policy is to maintain an equitable and efficient system of levying taxes and collecting revenues to finance the federal government. Tax policy is, of course, an important aspect of fiscal policy. In recent years, the significance of tax policy in relation to income security policies has been increasingly recognized. Social security taxes, as they have risen, have become a much larger factor in the total tax system. Moreover, as various proposals for negative income tax were developed and analyzed, it became apparent that they would imply modifications in the character of the positive personal income tax. In concept, a single system for reporting all income from all sources and for assessing taxes or making payments came to be seen as desirable, even necessary. Conversely, it became evident that the tax system might be used to make incremental changes in the welfare system. This was the case in 1975, when Congress enacted the earned income credit, a 10-percent tax credit on income up to $4,000 declining to zero on income up to $8,000.

Paralleling these changes in the issues of income security policy have been changes in the substantive concerns of social R&D, methods of research, and the application of research results. This study assesses the level and content, planning and management, and dissemination and user involvement in current R&D on income security. First is a brief description of the aggregate federal social R&D effort for income security. The next section presents a brief historical exposition and a more-detailed assessment of R&D management practices in five selected agencies. The study concludes with a consideration of interagency oversight and a recapitulation of the findings.

TABLE 2-1 Social R&D Obligations for Income Security ($thousands)[a]

Agency	Fiscal 1976	Fiscal 1977	Income Security and Social Service[b]
Department of Health, Education, and Welfare			
Assistant Secretary for Planning and Evaluation	34,050	34,550	20,600
Social Security Administration	25,702	27,653	8,400
Social and Rehabilitation Service	9,350	9,400	6,400
Office of Human Development	75,949	65,191	
Department of Housing and Urban Development			
Office of Policy Development and Research	58,025	68,387	17,461
Department of Labor			
Employment and Training Administration		17,000	
Bureau of Labor Statistics		62,700	
Department total	106,800	128,800	
Department of the Treasury			
Department total	25,407	25,884	1,800
Department of Agriculture			
Food and Nutrition Service	2,828	6,200	4,300

[a] The figures in this table were developed by the Study Project on Social Research and Development. For more detailed information, see Mark A. Abramson (1978) *The Funding of Social Knowledge Production and Application: A Survey of Federal Agencies.* Study Project on Social Research and Development, Vol. 2. Washington, D.C.: National Academy of Sciences.

[b] Fiscal 1977 only.

SOCIAL RESEARCH AND DEVELOPMENT

The federal commitment to social R&D on income security is approximately $100 million annually, less than 0.1 percent of all federal expenditures for income security programs. Table 2-1 shows total R&D expenditures for agencies that fund research on income security issues. Where possible, the amount within each agency budget actually spent on R&D for income security and social services is specified. In some cases, however, expenditures for income security were too small to distinguish from those for social service R&D.

THE SCOPE OF THE STUDY

Dispersion of social R&D across the federal government limits the detail with which management issues can be addressed at an aggregate level. Drawing on the work of the Study Project itself, the National Research Council's Committee on Evaluation of Research on Poverty (National Research Council 1979) has enumerated some of the obstacles to a rigorous R&D study in the income security field (pp. 82–83):

> . . . First, there are more than 180 agencies, bureaus, offices, and divisions that support social research in the federal government. . . . It is possible to identify at least some poverty-related research projects in many of these agencies. . . . For example, a preliminary computer search of the Smithsonian Scientific Information Exchange files, which contain data for less than 60 percent of all federal research projects, produced listings for several thousand projects involving poverty research.
>
> Second, although agency research reports often contain lists of research projects, detailed project descriptions are seldom provided. Moreover, agency publications rarely provide information on project expenditures or on the disciplines and affiliations of the researchers. In order to obtain such data, contract and grant files in each agency must be individually examined.
>
> Third, a number of unresolved problems impede the collection of reliable data on the federal funding of social research generally and research on poverty specifically. One problem is that research activities are seldom identified as specific items in agency budgets (in part because agency research budgets are often the first to be cut by Congress). Another problem is that the organizational location of research activities can change from year to year. Moreover, the meaning of the term "research" is open to debate and a formal distinction between research and other activities that produce and apply knowledge is often difficult to maintain. . . . As a result, agencies may combine statistical recordkeeping, dissemination activities, demonstrations, experiments, program evaluations, and basic research activities in such a way as to make subsequent attempts to identify research expenditures extremely difficult.

Given these limitations, the Study Project selected a number of agencies and programs for in-depth study in order to evaluate level and content, planning and management characteristics, and dissemination and user involvement of social R&D in the income security area:

- Department of Health, Education, and Welfare: Office of the Assistant Secretary for Planning and Evaluation;
- Department of Health, Education, and Welfare: Social Security Administration;
- Department of Health, Education, and Welfare: Social and Rehabilitation Service;

- Department of Housing and Urban Development, Assistant Secretary for Policy Development and Research: Housing Allowance Research Programs;
- Department of Labor: Assistant Secretary for Policy, Evaluation, and Research; and
- Department of Labor: Office of Policy Evaluation and Research.

This selection comprises the major performers of income security R&D in the federal government. Research programs in the Department of the Treasury and the Department of Agriculture represent smaller federal commitments and were beyond the scope of the Study Project's inquiry. This section also presents research management practices in different organizational settings. The departments discussed in this study are located at various levels in the bureaucracy and thus reflect a variety of different political and bureaucratic forces. Substantive research concerns within the income security system vary considerably; depending on the department, the primary concern may range from poverty to employment to distributional issues. Finally, the type of research support differs among departments. The Social Security Administration, for example, operates a large intramural effort, whereas the Office of Policy Evaluation and Research in the Department of Labor concentrates strictly on the management of contracts.

An important determinant of the current organizational and substantive structure has been the war on poverty experience—especially the work done for the Office of Economic Opportunity. This experience is described below as a historical preface to the agency studies.

A HISTORICAL PREFACE: THE OEO EXPERIENCE

At the beginning of the war on poverty in the early 1960s, the belief existed that a large-scale federal commitment to social R&D would produce clear policy objectives for alleviating the conditions of poverty. The faith underlying the war on poverty held that effective programs could be launched *en masse* and could provide significant improvements in the lives of the poor (Aaron 1977). A substantial research effort in the Office of Economic Opportunity (OEO) was created with this faith. The intention was to develop an understanding of the sources of poverty and link this knowledge to effective program design. Throughout most of the 1964-1973 period, OEO's social R&D activities (including policy research and evaluation) were unusually broad in scope. Respondents frequently assessed them as being well above the average of such activities supported by the government in innovation and policy relevance.

With the passage of time, however, an increasing skepticism developed about whether services and opportunity programs could have a significant impact on poverty. During the last two years of the Johnson administration OEO labored to maintain its mandate and support from Congress. Under the first Nixon administration, the agency managed to protect its programs but lost its role as a strong legislative force. In 1973 OEO was dismantled, and all programs were either transferred to other agencies or terminated. The research and development activities were split on the assumption that R&D should follow program functions. The bulk of the R&D funds and staff went to the Department of Health, Education, and Welfare (HEW); about two-thirds was assigned to the Office of the Assistant Secretary for Planning and Evaluation.

A number of factors may account for the breadth and quality of OEO's social R&D effort (Glennan 1973, p. 2). The war on poverty symbolized a major new policy thrust of the period, and OEO was the primary instrument for its implementation. As a result, talented individuals were attracted for both the managerial and research tasks. In the early 1960s, there was also an infusion of operations and systems analysis ideas from the defense area into the civilian agencies of government. And, like the concept of economic security in the 1930s, poverty was a concept that cut across institutional lines. The Economic Opportunity Act authorized activities in such diverse fields as community action, economic development, health, education, employment and training, and legal services. At the same time, lack of data about the poor, different views of the effectiveness of alternative intervention techniques, and value differences that significantly constrained what was politically feasible lent support to a substantial investment in R&D.

The formal location of OEO in the Executive Office of the President and the special relationship of the agency head to the White House throughout much of the post-1960 decade helped to minimize the effect of functional boundary constraints that limit the outlook of most federal agencies. Cooperative initiatives among the White House, the Office of Management and Budget, and the cabinet departments were facilitated. The breadth of OEO's programmatic concerns was reflected in the sections of the act authorizing social R&D. Section 232 provided "a very broad, general authority under which an extremely varied array of studies could be undertaken" (Glennan, p. 2). Even as late as 1973, for example, the OEO Office of Planning, Research and Evaluation had a budget of almost $50 million. Major R&D expenditures were being made in the field of welfare reform, employment and training, community development, education, and day care; smaller amounts went to state and local finance and basic research.

Two developments from the OEO experience were especially important in shaping current practice of income security R&D. The Office of Research Plans, Programs, and Evaluation (RPP&E) and the University of Wisconsin established the Institute for Research on Poverty in 1966. Conceptually, the institute resembled the think-tank model that the Rand Corporation had pioneered at the Department of Defense. Wisconsin agreed to staff the institute with faculty members from a broad disciplinary base: economics, law, political science, social work, sociology, psychology, etc. Faculty members were expected to continue to work within their departments and to devote roughly half their time to the institute. The institute and its staff had authority over research direction (Williams 1971).

A second, related development was OEO's bold sponsorship of a controlled social experiment in negative income taxation. In 1967, uncertainty existed over the feasibility of social experimentation—neither the administrative experience nor the expertise had been demonstrated (Skidmore, no date, p. 14). The negative income tax experiments represented the government's first attempt to test hypotheses rigorously through actual field administration of a program.

OEO's original exposure to the policy potential of a negative income tax came from both staff interest in the concept and particular awareness in the research of Robert Lampman and Christopher Green (Williams 1971). The concept of a negative income tax experiment was explored by Heather Ross in a paper for the United Planning Organization in December 1966. Glen Cain (then at OEO) and Guy Orcutt (University of Wisconsin) also prepared influential theoretical papers. On the basis of these materials, RPP&E decided to pursue a field project that would generate estimates of the labor-supply response to alternative income guarantees and tax rates.

After some unsuccessful overtures to academic institutions, OEO received a proposal for the project from Mathematica, Inc., a for-profit research firm in Princeton, New Jersey (Skidmore, no date). RPP&E was impressed with several features of this proposal. Mathematica named two distinguished economists, William Baumol and Albert Rees, as principal investigators for the project, and the proposal listed Heather Ross, a pioneer in the concept of an income maintenance experiment, as a potential staff member. Moreover, Mathematica was able to demonstrate support for the project from a number of key organizations, including the New Jersey Department of Community Affairs and the New Jersey Governor's Economic Policy Council (Skidmore, no date).

The cost of funding the Mathematica proposal was $3,773,320 for four years (Skidmore, no date). In spite of the magnitude of the project, RPP&E recommended that Mathematica be awarded a sole-source contract. However, the director of OEO, Sargent Shriver, refused to make an award of this size outright to a for-profit firm. Walter Williams, former chief of the Research and Plans Division, has discussed the factors influencing Shriver's decision (Williams 1971, pp. 155–156):

> According to those who dealt with Shriver on the issue, his bringing in of the Institute was motivated by a combination of (a) a political fear that the project might hurt OEO in Congress, (b) an interest in seeing the project go forward, (c) a consequent desire in terms of (a) to stress symbolically the research aspects of the project, and (d) a desire to get the most out of the Institute, for which he had held high hopes that had not yet been fulfilled. It is not clear how heavily each of the four factors weighed in Shriver's mind, but two things are certain: the political factor was quite salient, and Shriver had no particular scheme for working out the details with Wisconsin.

With this motivation, and under pressure to fund a proposal before the end of the fiscal year, OEO began to bargain with the Institute for Research on Poverty in June 1967. In exchange for the responsibility of overseeing a large project, the institute requested substantial control over the design and operation of the project. OEO responded favorably and relinquished responsibility for selection of the final sample and experimental design of the first phase of the project, eligibility standards for the participants, benefit levels for the participants, administrative methods for dispersing funds, management of project funds, procedures for determining accuracy of participant income reports, and any and all contracts into which the institute entered (Skidmore, no date).

Under these terms, a major branch of income security research was initiated. As the primary overseer of the experiment, the Institute for Research on Poverty emerged as a leading institution for the study of income security issues. On the whole, the project generated great excitement and expectation. In the Congress, where Sargent Shriver had anticipated opposition, support for the project came from unexpected sources. Robert A. Levine, recalling testimony before the Joint Economic Committee, notes (Levine 1974, p. 12) that "Congressman Melvin Laird praised OEO for mounting the experiment and criticized HEW for not doing so." At that time, Laird was a congressional representative from

Wisconsin and the senior minority member of the appropriations committee reviewing HEW and OEO budgets.

Although social experimentation represented a creative new tool for income security research, its applicability was limited by several inherent characteristics. Large social experiments are an expensive and time-consuming method of producing knowledge. Before any analysis can be done, time and resources are required for experimental design, start-up, administration, benefit payments, and data collection. When the results are finally available, the political motivation for the project may have shifted. In addition, for any given research need, there may be more appropriate data sources; the New Jersey experiment, however, proceeded from Harold Watts's finding that cross-sectional analysis would not produce the necessary information (Levine 1974). Finally, the legitimacy of experimental results may be limited by the weakness of theoretical underpinnings. A 1971 National Research Council study of the university-based Insitute for Research on Poverty raised concern about this problem (National Research Council 1971, p. 48):

> Even with first-rate people there are reasons to be skeptical about the potential power of evaluations and social experiments as policy instruments. The rising demand within government for experiment and evaluation is understandable, as is impatience with the limited ability of social science theory to deal with policy questions in a manner of immediate utility to policy-makers. However, there is also less awareness than there should be among the proponents of evaluation and experimentation that the state of existing social science theory imposes severe limits on what one can conclude from these instruments for assessing or improving policy making.

OEO sponsorship of the New Jersey experiment represented a major, but qualified, extension of income security research potential. Since the dismantling of OEO, it has proved to be a powerful legacy; several large social experiments on income security issues are being administered. A more significant consequence of OEO's termination is the absence of any organization performing an effective research coordinating role. With this background, we move on to consider the contemporary R&D management picture in selected agencies and programs.[1]

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[1] Mark Abramson prepared data and descriptions for the agency studies. For further information on level and content of income security R&D, see the final report of the Committee for Evaluation of Research on Poverty (National Research Council, 1979).

ASSISTANT SECRETARY FOR PLANNING AND EVALUATION

THE LEVEL AND CONTENT OF SOCIAL R&D

The Office of the Assistant Secretary for Planning and Evaluation (ASPE) was established in 1965 in order to bolster the Department of Health, Education, and Welfare's capacity for policy analysis. Major responsibilities of ASPE include the development of short-range and long-range policy objectives, program evaluation, and analysis of cross-cutting department problems as well as various programming and budgeting functions. ASPE's other research interests are in the areas of human services and health services.

ASPE's interest in income security issues increased significantly in 1973, after the office assumed the bulk of OEO's poverty-related research program. This transfer brought a number of OEO staff with strong commitment, expertise, and experience in poverty-related research. ASPE also inherited an established working relationship with the Institute for Research on Poverty.

Table 2-2 presents data on ASPE's social R&D activities for fiscal 1975–1977.

ASPE's staff includes deputy assistant secretaries for income security, policy, health planning and analysis, and program systems. Three separate suboffices for planning, analysis, and research are located in the Office of Income Security Policy. The planning office has responsibility for problems that demand immediate attention, particularly within the budget-review process. The office of analysis pursues middle-range policy problems having devoted most of its time recently to developing policy options for welfare reform. Finally, the office of research manages the bulk of income security R&D.

ASPE's support of income security R&D is directed at imminent policy issues and basic research and analysis of statistical data. Policy-oriented R&D has focused on employment and coverage characteristics of income security programs that are facing the legislative agenda. A majority of this work has been dictated by short-run analytical requirements of the various welfare reform proposals. Abramson (1978, p. 246) gives examples of policy-oriented R&D:

> *Research on Disability Insurance Applications.* This project was an econometric analysis of the determinants of disability insurance applications. Analysis attempted to explain the cause of the recent growth in applications and to predict future growth.

TABLE 2-2 Social R&D Obligations of the Office of the Assistant Secretary for Planning and Evaluation ($thousands)[a]

	Knowledge Production Activities[b]				Knowledge Application Activities[b]			
Fiscal Year	Research	Policy Formulation Demonstrations	Program Evaluation	Total	Development of Materials	Dissemination	Total	TOTAL
1975	7,274	19,940	2,588	29,802	41	161	202	30,004
1976	11,086	17,889	5,075	34,050	-	-	-	34,050
1977	10,975	18,200	5,375	34,550	-	-	-	34,550

[a] The figures in this table were developed by the Study Project on Social Research and Development. For more detailed information, see Mark A. Abramson (1978) *The Funding of Social Knowledge Production and Application: A Survey of Federal Agencies.* Study Project on Social Research and Development, Vol. 2. Washington, D.C.: National Academy of Sciences.

[b] For an explanation of the categories used by the Study Project on Social Research and Development, see the Introduction to this volume.

Research on Labor Economics. This project focused on race differences in earnings, female wage rates, and labor supply. The study examined the factors that affect labor force participation of special groups, including discrimination, lack of education, and irregular employment histories. Possible remedial policies were examined.

Poverty, Dependency, and Family Structure. This project critically reviewed recent research on the causes of marital separation and divorce, marriage, and remarriage among women with children born out of wedlock. Research focused on the possible effects of federal welfare policy on these changes in family structure.

ASPE provides extensive support for basic research, data collection, and analysis activities. These three aspects of the R&D effort tackle poverty and distributional issues that are not necessarily motivated by specific program characteristics but provide an important basis for formulating income security policy. Analyses of data on economic and demographic factors that are exogenous to income security programs are an important part of this effort.

ASPE's commitment to basic research is apparent in its support of the University of Wisconsin's Institute for Research on Poverty, which amounted to roughly $1.6 million in 1977 (National Research Council 1979). Within this budget the institute is allowed considerable freedom to choose research direction. Its major research categories include: poverty and the size distribution of income and wealth; income transfer and income maintenance systems; labor-supply consequences of income maintenance; poverty, household decision making, and demographic behavior; segregation, discrimination, and poverty; legal, political, and administrative systems affecting the poor; and education and poverty.

ASPE also supports the longitudinal study of income dynamics at the University of Michigan's Institute for Social Research. For nearly a decade, a national probability sample consisting of 5,000 families has been interviewed yearly. The study has focused on economic variables (such as work hours, earnings, total income, and expenditures) and social variables to determine reasons for changes in family income and welfare. The study has focused on employment, income, and family-structure patterns of families with low incomes.

ASPE has also supported two simulation models, the Transfer Income Simulation Model, which helps to estimate costs and participation characteristics of alternative transfer programs, and the Dynamic Microsimulation Model, which simulates impacts of future demographic and economic changes. In addition, a congressionally mandated Survey of

Income and Education has been supported through an interagency transfer to the Bureau of the Census.

ASPE sponsors major social experimentation on income maintenance issues. In addition to the New Jersey Negative Income Tax Experiment, two other projects are under way, and one is undergoing final analysis:

Preparation of Final Report on the Rural Graduate Work Incentive Experiment. This experiment was designed to measure the behavioral response of rural working poor families to income-conditioned cash transfers along a number of social and economic dimensions, with emphasis on labor supply and mobility.

Analysis of Gary Income Maintenance Experiment. This experiment tested the effects of cash assistance programs, combined with day care and social services, on black urban families. Analysts are currently examining the behavioral and societal effects of alternative income maintenance policies, with particular emphasis on the effect of work incentives on such policies.

Seattle and Denver Income Maintenance Experiments. These two experiments, the most comprehensive of the income maintenance program, are testing the interactive effects of income maintenance (a negative income tax plan) and participation in a manpower program. The income transfer program is supplemented by one or more manpower programs, including either job training, counseling, and vocational guidance services or day care services for working mothers.

The experimental design of each project seeks statistically reliable results about the behavioral and societal consequences of alternative income maintenance policies. Originally the major emphasis was on the labor supply effects of such policies; recently more emphasis has been placed on household formation and family effects.

Fiscal 1977 expenditures for income maintenance experiments were approximately $9.7 million (National Research Council 1979). The experiments are expensive because they require major expenditures for benefits and administration in addition to any data collection or analysis. The experiments also represent a continuing budgetary obligation for ASPE. In the words of one official, a cutback in the experiments "would represent a failure of government to keep its commitment and suggest that a government guarantee is no good." ASPE's support of the Michigan Longitudinal Survey and the Institute for Research on Poverty represents similar obligations to ongoing funding. As a result, the scope of ASPE's R&D decision making is limited by the budgetary requirements of continuing large-scale programs.

THE PLANNING AND MANAGEMENT OF SOCIAL R&D

Whenever ASPE appropriations for income security R&D undergo scrutiny by the Congress, ASPE faces a litany of questions: "Doesn't all this duplicate other agency activity?" "Why aren't other agencies (e.g., the Social and Rehabilitation Service or the National Institute of Education) doing this research?" "Where has the research saved money?" "What good is all this research?" ASPE staff members characterize this scrutiny as a tool that the Congress uses to gain leverage over or intimidate the secretary of HEW. In the words of one ASPE official, "You want to slap the administration? Slash their research funds."

The visibility of the ASPE income security research budget has brought the assistant secretary into greater participation in research decision making. Decisions involving budgetary allocations are resolved at the assistant secretary's level. The assistant secretary makes many decisions solely on the recommendation of project officers. However, one criticism of this arrangement is that ASPE lacks an effective mechanism for comparing research priorities among functional offices. Instead, these offices prefer to gamble on decisions made at the top rather than to work out problems among themselves. Thus, this criticism charges, tough research decisions are made by managers at the assistant secretary's level, not by researchers.

A strong involvement in research decision making by the assistant secretary is partially dictated by the political forces that act on this office. Rufus Miles (1974, p. 72) has underscored the policy consequences of decision making in ASPE:

> This long-range planning role of the Assistant Secretary for Planning and Evaluation requires sophistication in understanding the competing political forces that act on and through the Congress, as well as in economic analysis. Enormous amounts of energy may be wasted if it is devoted to enterprises that have no realistic chance of acceptance by the Congress. Conversely, analyses of problems from a fresh perspective—analyses of problems that cut across the wide range of departmental functions and that deal with long-range issues in a way that can capture Congressional understanding and support—provide the Secretary with the most effective instrument he has for giving genuine leadership to the direction of the Department's programs.

Research decisions on substantive issues that do not affect the budget are made by the research staff, subject to the approval of the project officer. Decision making at this level is usually based on a review of working papers in conjunction with comments from academics or other interested parties. With this information, the research director may decide to push the project in one direction or another.

ASPE examines income security research issues from a broad departmental perspective. In part, this emphasis is inherited from the philosophy and technical capabilities of the staff members who were transferred from OEO. This emphasis also follows from the broad functional characteristics of ASPE's mandate. Finally, the broad perspective represents the academic training and intellectual interests of staff members. A particular interest in labor economics, for example, has even brought the office onto some extradepartmental research terrain.

Income security R&D in ASPE is split fairly evenly between intramural and extramural work. Staff members take on a variety of assignments ranging from in-house research to contract monitoring. For the most part, staff members, regardless of assignment, are researchers themselves and either perform their own research or work closely with performers outside.

ASPE funds some grants, but the majority of extramural work is performed under contracts, the method advocated by the assistant secretary for administration. One explanation for ASPE's reliance on contracts is that they are the most appropriate vehicle for producing the required knowledge. ASPE does not make many grants because grants take control away from program staff, sacrifice government accountability, and obscure management procedures. Contracts, on the other hand, maintain authority for research direction at the administrative and management level, and they can be managed without strong substantive expertise. The use of sole-source contracts has diminished in recent years. Sole-source contracts have a history of abuse, and many officials are wary of their potential political and legal ramifications.

ASPE has no formal review board, although respondents to our study expressed some interest in the concept. (OEO had used an in-house review board that drew members from across the agency.) Apparently, apprehensions of built-in research bias have overridden the prospects of improvement that a formal board might bring.

DISSEMINATION AND USER INVOLVEMENT

ASPE has not developed any systematic program for dissemination of research results. For the most part, dissemination takes place informally on a project-by-project basis, either through professional meetings or in journal publications. The major vehicles for releasing findings are publications of the Technical Analysis Paper Series and summary reports of the major projects (e.g., the New Jersey Negative Income Tax Experiment, the Michigan Longitudinal Survey). One advantage of summary reports is their emphasis on placing research results in a policy context. The distribution of research results is based on recommendations compiled within the office. These recommendations reflect the disciplinary composition of ASPE's staff, who are primarily economists; thus a large portion of the social science community has not received results on an ongoing basis.

Overall, ASPE has emphasized dissemination within the Washington policy arena. In the case of important research findings, a presentation is made to the secretary, after which ASPE directly informs other agencies, congressional staffs, and interest groups. Results of the New Jersey Negative Income Tax Experiment, for example, were explained in a special briefing for the secretary and assistant secretaries of HEW and other departments. The briefing included a presentation by a team of researchers who had actually performed the experiment. In general, ASPE's assumption is that the academic audience will become aware of these results through the publications of the Institute for Research on Poverty or through informal academic channels. The institute has an active dissemination program that includes the distribution of discussion papers, reprints, special reports, and monographs. Institute findings also reach the academic audience through numerous journal publications, particularly the University of Wisconsin's *Journal of Human Resources*. (In fact, one entire issue of this journal was devoted to findings from the New Jersey Negative Income Tax Experiment.)

SOCIAL SECURITY ADMINISTRATION

THE LEVEL AND CONTENT OF SOCIAL R&D

The original Social Security Act of 1935 gave the Social Security Administration (SSA) continuing responsibility for research related to the problems of income security. The agency has built a strong in-house research capability, and currently more than two-thirds of its research is conducted intramurally by its Office of Research and Statistics. Throughout the history of the social security system, research has been an important element contributing to agency policy formation and program administration. The major program responsibilities of SSA are Social Security (Old Age, Disability, and Survivors Insurance) and the Supplemental Security Income Program.

The 1977 reorganization of HEW transferred responsibility for the Medicare program from SSA to the Health Care Financing Administration (HCFA). Also transferred to HCFA were the current Medicare survey, health insurance and related research, and the national health insurance model. The health policy formulation demonstrations were also transferred from SSA to HCFA. Table 2-3 presents social R&D activities of SSA for fiscal 1977.

A large portion of the agency's research involves the collection and analysis of statistical data. The Study Project considered it more appropriate to classify this agency's activities as research rather than as

TABLE 2-3 Social R&D Obligations of the Social Security Administration (fiscal 1977, $thousands)[a]

Knowledge Producing Activities[b]			Knowledge Application Activity[b]		
Research	Policy Formulation Demonstrations	Total	Dissemination	Total	TOTAL
17,650	9,350	27,000	653	653	27,653

[a] The figures in this table were developed by the Study Project on Social Research and Development. For more detailed information, see Mark A. Abramson (1978) *The Funding of Social Knowledge Production and Application: A Survey of Federal Agencies.* Study Project on Social Research and Development, Vol. 2. Washington, D.C.: National Academy of Sciences.

[b] For an explanation of the categories used by the Study Project on Social Research and Development, see the Introduction to this volume.

general purpose statistics, even though statistics are collected by the agency. Examples of research funded by SSA are presented below:

Retirement History Study

This is a 10-year longitudinal study designed to provide insight into the dynamics of the retirement process. The data it produces will provide information on actual changes in the lives of workers as a consequence of retirement and aging, contrasted with changes inferrable from cross-sectional studies.

Cross-Section Retirement and Survivors Studies

Cross-sectional surveys of the socioeconomic status of selected population groups are undertaken recurrently to provide the basis for appraising the adequacy of the social security program.

Other Retirement and Survivor Studies

The program examines the composition of social security beneficiary rolls in order to evaluate effectiveness in providing economic security to certain sectors of society. Research analyzes employment and earning patterns of women and assesses the effects of work history on the benefit rights of recently retired women. Analysis is undertaken to yield insights into the role of social security benefits for blacks and other minority groups that have been disadvantaged by social and economic conditions or racial discrimination.

OASDI Program Statistics

Statistics derived from the Old Age and Survivors Disability Insurance (OASDI) programs are analyzed. These statistics provide employment and earning records (in particular, the continuous-work-history sample), which are used alone or in conjunction with survey data to study the earnings history of selected groups. From the continuous-work-history sample, 10-year longitudinal employee data base has been developed.

THE PLANNING AND MANAGEMENT OF SOCIAL R&D

In addition to an extensive intramural capacity, SSA supports a smaller but significant extramural program. SSA has recently placed more emphasis on contracts, which generally support two types of activity. First, research to develop specific program expertise may be contracted with an outside institution if SSA does not have sufficient intramural capacity. For example, SSA lacked in-house capability for a study of payments to persons in domiciliary care. Second, SSA occasionally supports outside analytical projects, primarily for the procurement of new data.

Intramural capability is the hallmark of the SSA research program. Officials are careful to note that contracts are used as an adjunct to a presumed strong intramural capacity. In addition to contracts, SSA awards grants of roughly $500,000 each year. Grants are generally given for small investigator-initiated projects.

Budget justification in the Office of Research and Statistics (ORS) is a rigorous process. Divisions are required to produce detailed information on project and activity descriptions, resource requirements, personnel requirements (divisions are required to indicate the number of labor hours required plus the percentage of time each staff person will devote to certain areas), amount of contract work required for each of the next two fiscal years, fiscal/data processing requirements, milestones (publications, papers, work schedules), and any special major expenses. In addition, SSA maintains a management information system that provides monthly data on division expenditures. At any time, divisions can request information on the current status of budget allocations.

The major complaints that program staff raised concerning ORS are that ORS requires too much paperwork, too much item-by-item justification of activities and resources, too much detailed accountability, and not enough "bureaucratic faith." Officials at ORS, on the other hand, suggest that program staff need to understand research problems better. They believe that researchers need considerable lead time and information to answer or even to provide data for what are perceived to be easy questions.

Officials at ORS illustrate this conflict with a scenario of the research process: At the initial stages of research, staff at the operating end of the programs are likely to be critical of ORS research strategies and activities. A conflict arises between ORS's interests in future needs and the program staff's concern with current problems. In the intermediate stages of an operation, program staff become more interested in research results and begin to demand answers. From the perspective of ORS, this creates a sticky situation: Researchers want to pursue their research and maintain a certain degree of purity, while program staff are suddenly eager to get involved and tinker with the design.

Overall, SSA has an excellent reputation for the quality and scale of its research effort. Criticism from outside the agency shows concern for a lack of creativity and policy responsiveness resulting from the relative insularity and autonomy of the SSA program. Given the nature of SSA operating programs and its long bureaucratic tradition, it is not clear how these concerns might be addressed.

DISSEMINATION AND USER INVOLVEMENT

SSA places great emphasis on the dissemination of research results. Examples from a June 1976 memorandum on its publications in production illustrate the variety of series that have been created to issue findings:

Social Security Bulletin (June 1976)
  Age Differences in Health Care Spending FY 1975, (Mueller and Gibson).
  Private Pension Plans, 1950–74 (Part 1) (Skolnik).
Research Report
  No. 47, Survey of Newly Entitled Beneficiaries (DRSS Staff).
Staff Paper
  No. 22, A Precise Formula for Primary Insurance Amounts (Rettig).
Miscellaneous Report
  Selected Characteristics of State Supplementation Programs for the Aged, Blind, and Disabled Under the SSI Program (Rigby).

Research and Statistics Note

No. 9, Legislation Affecting Social Services and Child Support Legislation in 1975 (Skolnik, Novotny).

Health Insurance Statistics Notes (No. 37)

Medicare, Number of Persons Insured, July 1, 1974 (Reuther).

Characteristics of Participating Providers, July 1975 (Barrett).

Users of Medicare Data for the PSRO Program, FY 1974 (Kolins).

Survey Report

Current Medicare Survey: No. 31, Use of Inpatient Hospital Care by Disability Beneficiaries (Chase).

Study in Income Distribution

No. 4, Estimation of Social Security Taxes on the March Current Population Survey (Bridges, Johnston).

SOCIAL AND REHABILITATION SERVICE

THE LEVEL AND CONTENT OF SOCIAL R&D

Until recently the Social and Rehabilitation Service (SRS) administered grants to states for the federal share of the following state expenditure programs: income assistance (Aid to Families with Dependent Children and assistance to the aged, blind, and disabled), medical assistance (Medicaid), social services, state and local training, and child welfare services. In the March 1977 reorganization of the Department of Health, Education, and Welfare, the responsibilities of the Social and Rehabilitation Service were transferred to other agencies within HEW. SSA received the income assistance programs, and the Health Care Financing Administration assumed the Medicaid program. The Office of Human Development Services received the social service and child welfare service programs previously administered by SRS. The research, evaluation, and demonstration activities pertaining to these programs were also dispersed to each appropriate agency. Because recent SRS experience illustrates some interesting R&D management issues, it is briefly discussed even though the performance of the agency itself is no longer at issue.

Research and evaluation activites in SRS were extensively intertwined. Therefore, although obligations were divided between the two activities, they will be discussed jointly. The research and evaluation activities of SRS had two major purposes: to develop the analytical methodologies, program data, and programmatic knowledge needed to evaluate and implement major policy and program options; and to develop method-

TABLE 2-4 Social R&D Obligations of the Social and Rehabilitation Service (fiscal 1976, $thousands)[a]

Knowledge Production Activities[b]				Knowledge Application Activity[b]		
Research	Policy Formulation Demonstrations	Program Evaluation	Total	Policy Implementation Demonstrations	Total	TOTAL
3,275	1,900	2,004	7,179	2,171	2,171	9,350

[a] The figures in this table were developed by the Study Project on Social Research and Development. For more detailed information, see Mark A. Abramson (1978) *The Funding of Social Knowledge Production and Application: A Survey of Federal Agencies.* Study Project on Social Research and Development, Vol. 2. Washington, D.C.: National Academy of Sciences.

[b] For an explanation of the categories used by the Study Project on Social Research and Development, see the Introduction to this volume.

ological and technological knowledge necessary to improve both federal, state, and local administration and local delivery of services. Table 2-4 presents social R&D activities of SRS for fiscal 1976.

Within SRS, suboffices of the Office of Planning, Research and Evaluation included the Office of Planning and Evaluation and the Office of Research and Demonstration. The latter contained separate sections for income maintenance, social services, and health (Medicaid) and a section for coordination of demonstration activities. The income maintenance section and research on child support enforcement and quality control were supported by an annual budget of $1.5 million.

For social services, a prime responsibility of SRS was monitoring and evaluating Title XX of the Social Service Amendments of 1974. Title XX constitutes a special revenue-sharing approach to those social services previously financed under the public-assistance provision of the Social Security Act. The legislation required SRS to evaluate the effectiveness of the program, make recommendations to Congress for program improvements, and examine the appropriateness of existing day-care standards. A first step in evaluating Title XX was the development of a micro-data reporting system for a sample of social-service recipients. These data provided the basis, in conjunction with comparison groups, for evaluating the effectiveness of the program. Evaluation of Title XX will determine whether Title XX services are instrumental in achieving recipient outcomes. In other words, do Title XX recipients of employment services get and retain more jobs and receive better pay than comparable individuals who do not receive such services? Or do Title XX recipients with chronic health-care problems have a better chance of avoiding institutionalization than comparable individuals not receiving such services? Other Title XX activities focus on evaluating state social service planning processes, citizen input into the planning process, and improved social service program management.

SRS supported a variety of activities concerned with income maintenance. A series of projects on the development of state forecasting capability, a micro-simulation model of the Aid to Families with Dependent Children program, and an analysis of case-load and cost dynamics were completed. Another study examined the effect of "income disregard" policies. Increased emphasis was being placed on management studies of public-assistance programs—effective organization, staffing, needed management control, optimal technology, impact on multiple program administration, etc. As part of these efforts, studies of the capability of states to detect fraud and abuse in public assistance programs were funded.

THE PLANNING MANAGEMENT OF SOCIAL R&D

The management of social R&D in SRS received criticism during the early 1970s for a lack of competence and rigor. The major shortcoming was a failure to formulate the current status, objectives, and context of the research program. This failure became conspicuous in SRS's responses to the secretary's research and evaluation guidance. As noted in an ASPE memorandum, the guidance requested that agencies furnish the following information for its research program:

> A. The actions that would be indicated by particular research findings, and the changes in current conditions which could be expected as a result of those actions;
> B. The number of people who would experience these changes;
> C. The cost of these actions relative to the costs of current actions;
> D. The probabilities that a project would produce particular findings;
> E. The cost of the research project.

From the secretary's viewpoint, the guidance helped to consolidate various research and evaluation subsystems that previously had been designed and budgeted independently. In addition, the documents encouraged agencies to specify their research programs in comprehensive and quantitative terms. For example, an HEW memorandum suggested the following approach to research subject identification:

> 1. Specify goal objective/variables and indicate in what direction the agency wishes to shift them (e.g., "number of unemployed persons" should be "reduced").
> 2. Indicate the relative importance of various goal/objective variables (e.g., is "number of unemployed" more important than "number who suffer accidents"?).
> 3. On the basis of reviews of past research, experience of program operators, etc.—
>
> a. Analyze each goal to identify important target groups associated with it (e.g., spinal-cord injured persons who are unemployed or ex-convicts who are unemployed).
>
> b. Indicate the relative size of these target-groups.
>
> c. Analyze goals to identify variables which affect them strongly. . . .
>
> d. Indicate the relative strength of the variables which are thought to affect goal attainment.
>
> e. Identify research and evaluation projects targeted on ways to affect the important target groups and influential variables.

Several inadequate attempts were made to formulate this information in the early 1970s. During the fiscal 1971 planning period, three drafts of research strategies were prepared by SRS and rejected by the Office of the Secretary. In each attempt, the tasks of specifying objectives, target population, theory, and interventions were treated superficially. The 1972 strategy demonstrated no significant improvement. An ASPE review of the plan noted that:

> As it now stands the R&D plan comprises projects which represent issues across the following range—
>
> a. issues which would probably be important given the most systematic analysis of information needs in SRS areas;
>
> b. issues of interest to researchers, but which seem to be of marginal or no importance to the SRS programs;
>
> c. issues as yet undefined, because the projects refer only to broad subject areas and specific researchers who represent a particular research approach;
>
> d. non-issues, i.e., projects which are not researchable or are discretionary services which serve purposes that are unclear or unimportant.
>
> Our best guess would be that 90% of the issues presented fall into the last three types, with the 10% important projects being largely demographic investigations aimed at filling voids in information necessary to plan the programs.
>
> In sum, we would say that in the area that is most important in terms of im-

> proving SRS research (generating issues) we have failed to do the job, and we have not improved much over last year.

Thus, if the guidance was built on a strong analytical effort by the agencies, the secretary would have an important tool for developing cross-cutting research approaches. Beyond the guidance's apparent usefulness to the secretary, it was hoped that the information it required would provide a minimum base for national research planning at the agency level. This base included definition of objectives ("measures being used or planned to be used to assess the quality of service or payment"), identification and measurement of target populations, development of theoretical bases, and identification of interventions and possible measures of their effectiveness. The importance of this base for SRS was noted in an HEW memorandum:

> It is apparent that that which is being asked of SRS (and the other Departmental agencies conducting research) as the base for the determination of knowledge needs is not differentiable from the base of information which would be necessary to make responsible Federal choices in the Department's service programs. In fact what is being requested is the implicit base from which the Agency derives the information necessary to inform the Secretary's decisions in the Long-Range Planning Cycle. If, as has been argued, it is impossible for SRS to comply with the requirements of the Secretary's Guidance then it follows that 1) SRS cannot manage *any* of its programs adequately; and 2) the Secretary's decision apparatus, based as it now is on the assumed knowledge and competence of the Agency, is built on a foundation of sand. Moreover, it is clear that the same kind of knowledge base will be needed under any foreseeable Federal roles in the SRS areas of service.

Later, an attempt to make SRS more accountable for research planning altered the process by which specific projects were bartered, but the thought processes of research management remained unchanged. The outcome of the fiscal 1972 planning effort included SRS funding of nearly $8 million in new projects—projects that were never brought to the attention of the Office of the Secretary. One ASPE review of this experience noted that: "Given the intention of moving SRS toward a situation where expenditure of research dollars is driven by a clear assessment of the agencies knowledge needs, the FY '72 research effort must be considered a failure."

In 1973, at the beginning of the second Nixon administration, a concerted effort was launched to improve the research capabilities and policy relevance of the SRS program. Numerous personnel changes were made, aimed at development of a strong management corps in the Office of Planning and Evaluation. This effort represented a change from its traditional, decentralized, program-oriented structure to a centralized structure designed to achieve a proper balance of policy and management emphasis. Within the agency the change was not welcomed, and antagonism toward the new research shop lingered in the program area.

As a centralized research capacity was developed, people with strong ties with the programs were, in many cases, separated from the research decision-making process. Under the new structure, program staff interacted with research staff liaisons who screened ideas through the SRS commissioners. The commissioners made some use of this information in ordering research priorities.

Within the Office of Planning, Research and Evaluation, a series of policy analyses was conducted to identify key issues and information gaps. From this basis, projects were modeled in order to maximize information. A particular concern was the problem of timing, which came up when events pushed the policy process ahead of research results and research was unable to affect policy decisions.

On the whole, decision making under the new management corps structured research more appropriately for policy purposes. Although SRS developed minimal intramural capacity, the level of social science expertise among contracting officers improved, and the process became more responsive to the needs of policy makers. An effort was made to simplify and synthesize the variety of research projects and bring them into some coherent whole. Although this approach yielded some mistakes and embarrassments, it also generated some useful policy research.

DISSEMINATION AND USER INVOLVEMENT

Officials at SRS expressed concern about the ineffectiveness of their grant advertisement efforts. Because it is not widely read, the *Federal Register* was considered inadequate. Similarly, advertisements placed in the SRS monthly newsletter had elicited only minimal response. On this basis, SRS officials were more comfortable awarding contracts, which were regarded as easier to solicit and manage. Requests for proposals (RFPS) placed in the *Commerce Business Daily* generally received favorable responses.

The proposal-review process at SRS consisted of assembling an in-house panel; outsiders were generally not invited to review proposals. The panel constructed an evaluation scheme for each project. The scheme for contracts was routinized over time, but for grants, evaluation was done primarily on an *ad hoc* basis. Before research decision making became centralized, SRS had solicited some outside opinions, mainly from academics. The associate administrator regarded this approach as "preposterous" in pursuing policy-oriented research; the feeling was that academics do not know what policy is.

SRS at one time had ten research institutes across the country, most of them attached to schools of social work. These were phased out because it was felt that the institutes were helping only the universities, not SRS.

Dissemination was a consideration of moderate importance at SRS. Final reports were reproduced but not distributed on any massive scale. Results were also disseminated through the National Technical Information Service and the SRS monthly newsletter. Generally, there was little synthesis or cross-tabulation of research findings.

SRS made efforts to encourage intrastate and interstate sharing of ideas and findings. In addition, SRS attempted to increase utilization of research results at the federal level through the creation of technical working groups. These interagency multidisciplinary groups were designed to take projects through the whole process from solicitation to review in the hope of stimulating broader utilization of results.

HOUSING ALLOWANCE RESEARCH PROGRAMS IN THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

THE LEVEL AND CONTENT OF SOCIAL R&D

The idea of a federal housing allowance program has been intermittently debated since the 1930s. Discussions surrounding the Housing Act of 1937 were largely concerned with the merits of rent certificates, as housing allowances were then called. Housing allowances were later an issue in hearings on postwar housing policy in 1944, the Housing Act of 1949, and before the President's Committee on Government Housing Policies and Programs in 1953. Issues that consistently arose during these discussions include the potential stigma attached to housing allowances, adverse effects on the housing supply, restraint on private enterprise, and various problems with administrative complexity and scale.

The Housing and Urban Development Act of 1965 contains rent supplement and leased public housing programs that further extended housing allowance characteristics. In 1967-1968 the President's Committee on Urban Housing recommended that "the potential merits of the housing allowance approach are such that it should be tried promptly on the experimental basis suggested." In response, the Department of Housing and Urban Development (HUD) contracted with the Urban

Institute for preliminary estimates of probable cost, rent response, and housing supply response of a national program.

HUD also initiated housing allowance demonstrations in Kansas City, Missouri, and Wilmington, Delaware, supported by the Model Cities program. Although the smallness of the sample in both demonstrations prevented generalization of the results, a number of indicators were generated: (1) Housing allowances may be used to improve the housing status of large numbers of families in a short period of time. (2) Housing allowances may be particularly effective in attracting families with very low socioeconomic characteristics. (3) Results may be seen in terms of obtaining standard housing or reducing overcrowding. (4) Housing allowances alone may not increase racial or ethnic integration; participants showed a high propensity to move in the patterns of their racial or ethnic groups.

The Experimental Housing Allowance Program

Following the passage of the 1970 Housing Act, HUD awarded a contract in March 1971 to the Urban Institute to develop an experimental strategy for a housing allowance program. Based on this preliminary work, an RFP for the Experimental Housing Allowance Program (EHAP) was issued in November 1971.

From the outset, EHAP research has concentrated on defining and analyzing the components of a national direct cash housing assistance program. These components have included the assistance formula, limitations on the use of assistance, nonmonetary assistance to recipients, administrative mechanisms, and coverage and costs of an operating program. Several specific questions have guided the research program (U.S. Department of Housing and Urban Development 1976, pp. 1-2):

- Who participates in housing allowance programs?
- How do participating households use their allowance payments?
- Does the quality of housing improve for participating households?
- Does a housing allowance program cause participants to change the location of their housing?
- Are there significant market responses to a housing allowance program? For example, what happens to the price of housing?
- What alternatives exist for administering the program?
- What are the likely costs of a nationwide housing allowance program?

Using these issues as a guide, HUD awarded contracts for experiments on supply, demand, and management. Within each experiment, responsibility for design was separated from that for operation and analysis. When the results became available, an additional contract was awarded for an integrated analysis of the findings. The three contracts for design components of the experiment are described below.

Stanford Research Institute was selected to design a demand (consumer) experiment that would determine how households, receiving alternate forms and amounts of assistance, use their housing allowances. Experimental sites were chosen in Pittsburgh, Pennsylvania, and Phoenix, Arizona.

A supply (market) experiment was contracted with the Urban Institute, which, in turn, subcontracted it to the Rand Corporation. The purpose of this experiment is to simulate a full-scale direct cash assistance program in the cities of Green Bay, Wisconsin, and South Bend, Indiana. The experiment measures the reactions of an entire housing market to a full-scale housing allowance program in terms of housing or rental costs, residential mobility patterns, the behavior of bankers, realtors, and other market intermediaries, and the general community.

Finally, a contract was awarded to Abt Associates for the design of an administrative agency (management) experiment, which is evaluating various methods of administering a direct cash assistance program. Eight different public agencies were given broad latitude in designing and administering housing allowance programs for a maximum of 900 families over an experimental period of two years. Information collected from this experiment is to be analyzed in terms of four major administrative processes: enrollment, payment operation and controls, participant services, and overall management. Experimental sites were chosen in Salem, Oregon; San Bernardino County, California; rural North Dakota; Tulsa, Oklahoma; Peoria, Illinois; Springfield, Massachusetts; Durham, North Carolina; and Jacksonville, Florida.

In 1972 HUD issued contracts for the operation and analysis phase of these experiments. Abt Associates received contracts for the demand and administrative agency experiments, and the Rand Corporation was awarded a contract for full design, operation, and analysis of the supply experiment. The Urban Institute received a contract for an integrated analysis of the experiments, synthesizing, to the extent possible, the disparate findings of the three experiments. Most important, the integrated analysis explores techniques for appropriately generalizing the results to a national program.

Section 8 Housing Allowance Research

A second housing allowance program with a social R&D component is Section 8 of the Housing Act of 1974. Section 8 research evaluates an ongoing housing allowance program that provides money to landlords to supplement the rent payments of about 400,000 low-income tenant families. Benefits are paid to the owners of housing and are based on the difference between 15–25 percent of a participant family's income and a calculated fair market rent for each unit.

Section 8 research has focused on the assessment of fair market rents and their relationship to program effectiveness, analysis of methods of administrative effectiveness, the appropriateness of current administrative fee structures, analysis of housing quality standards applied to public housing agencies and their impact on the program, and assessment of participation by recipients, landlords, and project sponsors.

EHAP and Section 8 (existing housing) have several characteristics in common. For example, both programs provide cash assistance to low-income households in private rental units and, with the exception of variations tested in the EHAP demand experiment, require units to meet program housing standards. The primary differences between EHAP and Section 8 are characteristics of program scale, rent ceiling, homeowner eligibility, and direct payment of subsidies. Unlike EHAP, Section 8 provides for some housing rehabilitation and construction.

THE PLANNING AND MANAGEMENT OF SOCIAL R&D

All R&D in HUD is supported by the Office of the Assistant Secretary for Policy Development and Research (PD&R). (See also Seidl, "The Living Environment," in this volume.) The R&D activities of PD&R were authorized by Title V of the Housing and Community Development Act of 1970, which directed the secretary of HUD to develop research, evaluation, and demonstration capabilities that would bolster program effectiveness. Specific authorizations have been established by Congress for more specific research efforts, such as research on housing allowances, housing abandonments, lead paint poisoning, and housing for those with special needs, such as the elderly and the handicapped. Along with the above-mentioned responsibilities of development, evaluation, and demonstration, PD&R also supports the following activities: dissemination of HUD research results, program evaluation, economic analysis, and policy analysis to assist in the formation of departmental policy. (See Tables 2-5 and 2-6 for topic and funding breakdown within PD&R.)

The performance strategy for EHAP and Section 8 is based on supporting and closely monitoring several large-scale contracts as opposed to many small projects, which, it is felt, would lead to a decrease in level of control and communication. Some problems are evident in this approach. When HUD supports one contractor on a multimillion dollar project,

TABLE 2-5 Social R&D Obligations of the Office of the Assistant Secretary for Policy Development and Research by Program Area (fiscal 1977, $thousands)[a]

Housing	31,000
Community development	11,900
State and local government	9,500
Product dissemination and transfer	700
Program evaluation	4,000
Statistics	11,300
TOTAL	68,400

[a] The figures in this table were developed by the Study Project on Social Research and Development. For more detailed information, see Mark A. Abramson (1978) *The Funding of Social Knowledge Production and Application: A Survey of Federal Agencies.* Study Project on Social Research and Development, Vol. 2. Washington, D.C.: National Academy of Sciences.

what happens if the contractor does not perform? What is the backup? How long does it take for another contractor to become operational?

To overcome these problems, a two-phase strategy has been used in EHAP. In phase one contractors develop a program design, giving HUD staff an opportunity to monitor the contractor. If HUD is not entirely pleased, the contractor is dropped. If the design is satisfactory, the performer is given a contract for the second phase—operation and analysis of the project. However, even in this plan, when a contractor fails, HUD is left with large chunks of program responsibility and no one to perform them. Recently, HUD started breaking up major pieces of work into two or three smaller components, contracting with different performers for each piece. Performers know that there is more work if they do well. It is hoped that this system will induce more competition and, ultimately, higher-quality results.

EHAP operates from the Division of Housing Allowance Research in PD&R. Section 8 research is performed from the Office of the Assistant Secretary for Housing Production and Mortgage Credit. Significant interaction takes place between the staffs of EHAP and Section 8. Above-average interaction among researchers, program operators, and policy makers takes place in the housing allowance area. Staff members indicated that research decision making in the housing allowance divisions is open, multidisciplinary, and relatively nonhierarchical.

TABLE 2-6 Social R&D Obligations for Housing of the Office of the Assistant Secretary for Policy Development and Research (fiscal 1977, $thousands)[a]

Knowledge Producing Activities[b]			Knowledge Application Activities[b]				
Research	Policy Formulation Demonstrations[c]	Total	Policy Implementation Demonstrations	Development of Material	Dissemination Activities	Total	TOTAL
6,855	17,461	24,316	4,991	1,637	100	6,728	31,044

[a] The figures in this table were developed by the Study Project on Social Research and Development. For more detailed information, see Mark A. Abramson (1978) *The Funding of Social Knowledge Production and Application: A Survey of Federal Agencies.* Study Project on Social Research and Development, Vol. 2. Washington, D.C.: National Academy of Sciences.

[b] For an explanation of the categories used by the Study Project on Social Research and Development, see the Introduction to this volume.

[c] Housing experiments are categorized as policy formulation demonstrations.

What explains the apparently successful relationship between research management and research performance in this area? One explanation is the attitudes of the program directors for Section 8 and EHAP. Associates of the Section 8 program director, who is a former PD&R staff member, give her high marks for understanding and appreciating the complex nature and limitations of research. The director described herself as a "human bridge" between PD&R and the research programs. She considers research results essential and is willing to devote time and energy to research questions. Described by one colleague as a "convert," the director of EHAP in PD&R has seen the results of research that he initiated and nurtured turn into program regulations. From this experience, he is committed to working with program staff and taking the time needed to answer their questions and develop research strategies that address their concerns.

DISSEMINATION AND USER INVOLVEMENT

In the study of the living environment agencies in this volume, HUD program staff characterized research efforts as "mere eyewash" and not policy significant. The attitudes in the housing allowance area suggest that these findings may not be applicable across the agency. EHAP staff admitted that the program operating staff would paint a less open, rosy picture of R&D decision making and would question the relevance of research to programs. However, they said that this research-program split occurs throughout the department to some degree. The housing allowance research staff generally has a significantly better working relationship with program staff than do other research shops within PD&R.

The process of disseminating research results was elegantly described in one interview in terms of the floors of the HUD office building. PD&R, located on the eighth floor, sees any results coming from the EHAP and Section 8 programs as major research and promptly ships them off to universities and academically oriented performers. Researchers in the EHAP and Section 8 programs believe that this emphasis is misplaced and fails to reach the critical policy audience: Will the three or four program people on the sixth floor take the time to read the research results? And, if they do, will they be able to understand them and apply them to their day-to-day activities?

Overall, PD&R has received fair to good marks for the dissemination of housing allowance results. Secretary George Romney, who initiated EHAP, pushed the experiment to collect and analyze "practical" data during the program. He felt that immediate analysis would allow documentation and possible replication of successful characteristics. All parties agree that results of EHAP have influenced Section 8. One influence was an emphasis on practical, user-oriented program issues in R&D. An equally important influence has been a sensitivity to the limits of new ideas for research components: (1) Is the plan administratively feasible? and (2) Is the research doable?

Some EHAP findings have not been incorporated into Section 8 program design. For example, in the EHAP demand experiment, families are given direct cash payments to apply toward rent. EHAP findings suggest that when families have cash in hand, an incentive to shop around for housing is created. In Section 8, because of a political determination by Congress, payments are made not to the family but rather to the housing supplier. Thus there is no direct cash allowance strategy, and shopping incentives have been difficult to create.

DEPARTMENT OF LABOR

In the early 1960s the Department of Labor (DOL) first took on a decisive role in providing employment and training programs. In an attempt to bolster recovery from an economic recession, the Kennedy administration promoted the Manpower and Development Training Act of 1962 (MDTA). The primary orientation of MDTA was economic, concentrating on employment problems that had been induced by changes in technology.

Subsequent amendments to MDTA and a variety of Great Society legislation further strengthened DOL involvement in employment-related programs. Between 1966 and 1969, DOL employment and training policy and related R&D became concerned with coordinating and rationalizing the array of federal programs dealing with employment issues. Another concern that arose during that period was the relationship of work incentives to reductions in federal transfer expenditures. A third major concern was improving the flow of information in and performance of labor markets, particularly in depressed urban areas.

Since 1969, employment training policy and R&D have been concerned with two issues that have income security implications. One is the need to provide sharply targeted training and services to potentially employable unemployed and poor workers as an aspect of welfare reform. The other is the use of public employment as a countercyclical income transfer instrument—a large temporary public-employment program. In 1973, the Comprehensive Employment and Training Act (CETA) was passed, aimed at decategorization and decentralization of employment and training programs and raising new questions about the appropriate focus and effective delivery of employment and training R&D.

Paralleling these shifting policy and program emphases were differing attitudes among labor economists with respect to the causes of unemployment and underemployment, the seriousness of employment problems, and the effectiveness of programs in the context of changing social and economic conditions. A lack of consensus over what knowledge was necessary to determine appropriate policies and program actions was also an important issue.

Despite shifting policy concerns, departmental organizational changes, and the lack of scientific consensus, the employment and training R&D function has persisted since 1962, maintaining a low profile and adapting to changing circumstances in the immediate environment. Although the meaning of the R&D effort is uncertain, the record is impressive: more than 2,000 projects under 17 programs, all extramural, involving the expenditure of $250 million. Some were initiated by legislation, others by the department or the R&D unit itself. Because the program designation was "manpower," called since 1975 "employment and training," issues involving income security were not a continuing and major theme (National Research Council 1975).

TABLE 2-7 Social R&D Obligations of the Department of Labor ($millions, percentages in parentheses)[a]

Activity	Fiscal 1975	Fiscal 1976	Fiscal 1977
Knowledge production activities[b]			
Research	$17.1 (20.0)	$19.4 (18.1)	$22.4 (17.4)
Policy formulation demonstrations	$4.3 (5.1)	$3.3 (3.1)	$3.6 (2.8)
Program evaluation	$0.2 (0.3)	$1.5 (1.4)	$1.2 (1.0)
General purpose statistics	$50.7 (59.5)	$67.9 (63.6)	$74.1 (57.6)
Total	$72.4 (84.9)	$92.1 (86.3)	$101.3 (78.6)
Knowledge application[b]			
Policy implementation demonstrations	$0.7 (0.8)	$2.4 (2.2)	$14.8 (11.5)
Development of materials	$5.5 (6.5)	$5.7 (7.1)	$6.2 (4.8)
Dissemination	$6.7 (7.8)	$6.5 (6.1)	$6.5 (5.1)
Total	$12.9 (15.1)	$14.6 (13.7)	$27.5 (21.4)
TOTAL	$85.3 (100.0)	$106.8 (100.0)	$128.8 (100.0)

[a] The figures in this table were developed by the Study Project on Social Research and Development. For more detailed information, see Mark A. Abramson (1978) *The Funding of Social Knowledge Production and Application: A Survey of Federal Agencies.* Study Project on Social Research and Development, Vol. 2. Washington, D.C.: National Academy of Sciences.

[b] For an explanation of the categories used by the Study Project on Social Research and Development, see the Introduction to this volume.

Table 2-7 presents data on DOL social R&D activities for fiscal years 1975–1977. These data are allocated to agencies in Table 2-8.

Two offices in DOL with research obligations are discussed in this study. The Office of the Assistant Secretary for Policy, Evaluation, and Research performs an oversight function for all R&D activities within the department, responding as well to immediate policy questions from the secretary and deputy secretary. Most research related to employment and training

TABLE 2-8 Social R&D Obligations of the Department of Labor by Agency (fiscal 1977, $millions)[a]

Agency	Total Social R&D Obligations
Bureau of Labor	$62.7
Occupational Safety & Health Administration	38.3
Employment & Training Administration	17.0
Employment Standards Administration	5.8
Labor Management Services Administration	2.8
Office of the Secretary	1.3
Bureau of International Labor Affairs	1.0
TOTAL	128.8

[a] The figures in this table were developed by the Study Project on Social Research and Development. For more detailed information, see Mark A. Abramson (1978) *The Funding of Social Knowledge Production and Application: A Survey of Federal Agencies*. Study Project on Social Research and Development, Vol. 2. Washington, D.C.: National Academy of Sciences.

is undertaken by the Office of Policy, Evaluation, and Research (OPER) under the assistant secretary for employment and training. (These offices will be considered in turn, with attention to relationships between the two.) In addition, several other offices in DOL undertake research related to income security, among them the Office of Unemployment Insurance within the Employment and Training Administration (formerly the Manpower Administration); the Bureau of Labor Statistics; the Labor Management Services Administration; and the Pension Benefit Guaranty Corporation, which oversees the administration of the Employee Retirement Income Security Act of 1974. A recent National Research Council publication, *Knowledge and Policy in Manpower* (National Research Council 1975) examines the DOL employment and training R&D program in detail.

ASSISTANT SECRETARY FOR POLICY, EVALUATION, AND RESEARCH

The Level and Content of Social R&D

The Office of the Assistant Secretary for Policy, Evaluation, and Research (ASPER) was created in 1969 as a means of strengthening analytic capabilities at the secretary's level. Before 1965, responsibility for communicating policy priorities to department researchers and subsequently translating research findings had resided in the small Office of the Assistant Secretary for Policy Planning. Although this office was abolished in 1965, the secretary's policy planning staff carried on these functions through 1968. Enjoying long staff tenure and easy access to the secretary, these policy planners maintained a particular interest in the Manpower Administration's research and made ongoing attempts to apply research findings (see National Research Council 1975).

ASPER's mission is quite broad, involving policy development, program budget analysis, planning, coordination, and synthesis for R&D and evaluation within the department. Since ASPER itself has a small budget ($600,000–700,000 per year between 1972 and 1976), its role is generally limited to liaison between OPER in the Employment and Training Administration[2] and department policy makers and encouragement of particular studies by other agencies in the department. Perhaps because of its proximity to the secretary, ASPER has found itself attending to immediate analytic needs to the exclusion of other functions (National Research Council 1975). Moreover, for the first six years of its existence, the office lacked stability and continuity because of a high turnover of people in top positions; four assistant secretaries served between 1969 and 1975, and the position was unfilled during 1973 (National Research Council 1975).

The Planning and Management of Social R&D

Research priorities within ASPER are established mainly by the assistant secretary and the staff, who have strong academic credentials, particularly in labor economics. The actual involvement of the assistant secretary has varied considerably, depending on the energy and interest in research issues of the person holding the position. During Secretary of Labor John Dunlop's tenure, the Office of the Secretary took an active part in research planning. The former secretary telephoned program people, directly asking them questions about research. This motivated program officers to stay abreast of research issues and may have had some impact on quality.

Once priorities have been determined, the ASPER staff encourage DOL agencies to fund research according to these goals. In certain cases,

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[2] Before 1976, employment and training research responsibilities were lodged in the Office of Manpower Research and Development in the Manpower Administration (later to become the Employment and Training Administration).

ASPER will take direct responsibility for research projects but will charge the line agency to which the research is relevant. This evaluation tax, as it is called, augments the ASPER budget by about $700,000 per year.

In general, ASPER depends for its research allocation on the secretary who has discretionary power to divide appropriations from the research money in regular program accounts among the offices. Each program office has a small allowance for research. According to one ASPER staff member, requests for increased R&D funding were not popular in Congress—mainly because program evaluation generally meant being critical of programs that were especially dear to Congress. Thus, in order to avoid exposure, division managers within OPER sometimes adopted a conservative strategy of asking for the same yearly appropriation—even though ASPER would often have preferred to ask for more on their behalf.

Research budgeting was politicized to some extent under the terms of the 1973 Comprehensive Employment and Training Act (CETA) appropriations. Under the present appropriations structure, a maximum of 20 percent of the total CETA appropriation (disregarding certain amounts for public service employment) is available under Titles II and IV of the act. Employment and training research is funded under Title III, which also includes programs for special groups, with mandatory amounts for Indians, migrants, and summer youth employment. Certain organizations, such as labor unions and occupational and industrialization centers, lobby forcefully for particular programs that are funded under the secretary's discretionary authority. Once begun, these programs are hard to eliminate, so the secretary's discretion under CETA becomes gradually circumscribed. At the same time, studies of certain program areas, such as retirement and pension benefits and occupational safety and health, are required by law. ASPER and OPER staff complain that these mandatory research obligations as well as the heavy politicking for discretionary funds tend to whittle away the R&D money they regard as their own. These complaints, however, were taken less seriously by officials at the Office of Management and Budget (OMB). OMB argues that it is the department's fault if it overcommits its discretionary monies. As evidence, OMB points to the large amounts of discretionary funds that are carried over from year to year by DOL.

In identifying and selecting performers, ASPER uses a mix of RFPS and program solicitations, which invite a broad range of responses. All awards are by contract. In ASPER's early days, 80 percent of research commitments were for sole-source contracts. (The office had developed an effective network of sole-source performers through its research managers, many of whom were academics and labor economists.) In fiscal 1976, which was the first year of its competitive funding, about $500,000 was awarded. Some unsolicited proposals were received, although usually "preproposals" or conversations preceded an unsolicited proposal. This pattern is frequent in the R&D agencies, although it occurs more often with commercial enterprises than with academics because of greater investment and risks undertaken by the former.

The review process in ASPER tends to be internal. Most of the projects funded by ASPER are relatively small, in the $30,000–40,000 range. Despite its confidence in its judging of proposals, the ASPER staff does rely on some outside review. For example, ASPER assisted the Employment and Training Administration in designing a longitudinal study of the WIN program, then used a panel of outside experts to review the research design. Any major projects (more than $100,000) are also sent around the department for review.

The ASPER oversight role includes a mandate to review all proposed research (of amounts greater than $25,000) in the department. This mandate includes veto power over evaluation contracts and the ability to advise on sole-source arrangements of all DOL research agencies. Before 1976, ASPER's attention was mainly directed toward the Office of Evaluation within OPER, encouraging that office in particular program areas and shaping its studies. In an effort to understand the impacts of different employment and training programs, ASPER's work from 1972 to 1976 emphasized program evaluation. Studies of labor demand were also high on the list of priorities, as were studies of the Employment Retirement Income Security Act of 1974.

Dissemination and User Involvement

Most users of ASPER research results are within the Department of Labor. The Office of Policy in ASPER should have been a major user, according to a former assistant to the assistant secretary, but there was little explicit involvement with potential users of research efforts. A dissemination strategy was devised for every ASPER project. Generally, the research produced was reviewed throughout DOL before publication. One series of publications, the Technical Assistance Papers, was given wide circulation both within DOL and in the academic community.

ASPER's responsibilities include the synthesis of project results from within ASPER as well as from other agencies within the department, such as OPER. There is some evidence that before 1975 this function was not well performed. The National Research Council (1975, pp. 129–130) report comments:

> ... ASPER staff members are heavily engaged in "fighting fires" and meeting tight deadlines; they have little time to examine OMRD's work or to synthesize R&D findings for application in policy development. There have been instances where this was done, but ASPER is generally insensitive to the potential uses of OMRD project results. Some ASPER staff members expressed the view that even if there were time and concern, ambitious young academics want to do their own research rather than summarize the research of others for policy makers. Nor were many top policy officials in the 1972–74 period interested in such examination and synthesis as a means of enhancing R&D utilization.

Although in 1976 the assistant secretary believed that ASPER had served as an able synthesizer of research knowledge (a yearly summary of evaluation studies was one example), a deputy to the assistant secretary later commented that such syntheses were usually carried out on an *ad hoc* basis without systematic effort. An example of such a product is the chapter on the WIN program in the *Manpower Report of the President* in which an attempt is made to provide a historical and critical review of the program.[3]

OFFICE OF POLICY, EVALUATION, AND RESEARCH

The Level and Content of Social R&D

The R&D program of the Employment and Training Administration (formerly the Manpower Administration) is the largest extramural research program in DOL. Before 1970, two offices were responsible for R&D—the Office of Special Manpower Programs (which carried out experiments and demonstrations) and the Office of Manpower Research (which administered all other types of R&D). As of 1976 these responsibilities were combined in the Office of Policy, Evaluation, and Research (OPER) and divided into the Office of Policy and Planning, the Office of Evaluation, and the Office of Research and Development.

The Office of Research and Development conducts the bulk of the research. With a budget hovering around $13 million per year and a staff of 60, the Office of Research and Development supports both program-related and long-term empirical research. Four programs in particular are supported by the R&D effort.

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[3] As of 1978, an Office of Income Maintenance had been created within ASPER from an explicit concern for this policy area. Most of the studies dealing with income maintenance issues are in fact carried out by the Office of Research and Development within OPER in the Employment and Training Administration.

- CETA: Research is short term and specialized, primarily for the purpose of quick response.
- Employment Service: Research addresses long-term policy issues, such as "Is the program doing anything? Should its focus be redirected?"
- Unemployment Insurance: Research on actuarial issues is done by the Unemployment Insurance Office itself, while the R&D office of OPER tends to engage in fundamental policy-oriented studies.
- Bureau of Apprenticeship and Training: Supports research designed to improve its own operations.

In addition to these program-related efforts, OPER also supports some long-term research aimed at a better understanding of national labor markets. Of such projects, perhaps the best known is the National Longitudinal Survey, which is now more than ten years old. R&D efforts have also included doctoral, postdoctoral, and institutional grants to encourage researcher training and the development of new R&D facilities. OPER also prepares the annual *Manpower Report of the President*, a review of the employment picture in the United States, and explores policy issues. Projects have varied in duration from several months to a decade; the average study lasts three years. Individual fundings range from $10,000 or less to more than $1 million per year, with the average project costing $150,000-$200,000 (National Research Council 1975).

In addition to funding research projects, OPER has used experimental and demonstration projects to promote strategies of social change. Such projects have attracted capable practitioners to nascent employment and training programs, helped reduce opposition to employment and training programming in communities, and provided civil rights activists with the means of leadership and upward mobility. These emphases faded in importance as employment policy efforts slowed in the late 1960s and employment and training programs became an established part of federal activity (National Research Council 1975).

The Planning and Management of Social R&D

OPER must maintain a close relationship with both DOL program offices and top management in the department. ASPER is formally responsible for oversight of OPER. Horizontal relationships with other agencies within DOL are fairly fluid. As the 1975 National Research Council report points out (p. 14):

> OMRD's [now the Office of R&D within OPER] institutional and informal relationships with policy makers, program administrators, operational, analytic, and

field staff, and with other R&D units have been constantly changing. The Office has had to adjust both its program and its internal management processes to many changes of Departmental personnel and to the frequent redefinition of manpower policy and program priorities; those realities of existence in a mission setting have made it extremely difficult to define and sustain effective R&D strategies.

DOL's annual appropriations request has never included a line item for the R&D office of OPER or its predecessor offices. Rather, the employment and training R&D effort, like most within DOL, has been funded as a "residual" activity. Funds for R&D, along with funds for program evaluation, policy planning, staff training, and technical assistance, have been incorporated into a "program support" category for the department's Employment and Training Administration (ETA). Responsibility for these activities is scattered among several ETA units.

In 1976, the recently created Research Policy Committee made decisions on research priorities. (Before the organization of this committee, OPER used open solicitations, with award decisions made by the research staff.) The policy committee brings together the research staff of OPER and the directors of programs within DOL. Operational and policy long-term and short-term needs are jointly determined by research and program staff. The committee approach helps to coordinate research but also creates another level of authority and leads inevitably to delays in reaching a consensus. For example, a large project to evaluate the impact of CETA was delayed considerably by the policy committee. It then had to be reviewed by both ASPER and OMB, which intervened because of the size and political implications of the project. Since then, the policy committee has shifted the focus of research from an academic to a program orientation and represents an attempt at departmental research planning.[4]

The R&D program within OPER develops a plan annually. In its preparation the R&D director and staff solicit ideas from all programs within the Employment and Training Administration as well as from regional directors of DOL. Research packages are constructed and presented to the assistant secretary for employment and training, who seeks departmental clearance. In general, the R&D effort is tied almost exclusively to the administration of CETA.

OPER's R&D office uses a standard range of methods for performer selection, including peer review panels, RFPs, and the review of unsolicited proposals. Sole-source arrangements are generally discouraged. The director of the R&D office regretted his inability to attract academic performers with sole-source arrangements, believing that this policy has "effectively cut off the department from the brains of the United States." In addition, he criticized the quality of research done by private firms, citing lack of dedication, mercenary motives, and lack of continuity in research. Project monitoring is done primarily by office staff.

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[4] In 1976, the director of OPER's R&D office believed that the planning effort was hindered by the lack of communication between operating program directors and program officers. He suggested that program staff often are unaware that their director sits on the policy committee.

Most R&D projects within OPER are conducted extramurally by academics, private firms, or government agencies. As of 1976, dollar support was divided fairly evenly between grants and contracts. This strategy was deliberately chosen as the most flexible approach to diverse and shifting priorities with a limited budget as well as to new lines of study in an ill-defined field. Over time, the emphasis in the manpower R&D program has shifted: experiments and demonstrations, which dominated the effort from 1962 to 1970, have gradually declined in importance, with a concomitant increase in empirical research after 1970. Furthermore, model-building and structured, quantitative approaches to measure project effectiveness have become more popular. Corresponding to these changes in emphasis, research performers today are more likely to be social scientists, particularly economists, than in the early 1960s when local and state agencies sponsored and carried out experimental and demonstration projects. OPER does no in-house research but does fund studies done by ASPER through the "evaluation tax" arrangement. There is some sole-source funding, although the department prefers competitive arrangements—which often puts university competitors at a disadvantage, favoring the "Connecticut Avenue" contractors.

Dissemination and User Involvement

Dissemination is described by the R&D director as a very important function. A utilization division within the R&D office—one of the first of its kind within the federal government—is charged specifically with developing a utilization strategy for each project. Findings are reported in a variety of written forms, through informal contacts between R&D office staff and potential users and sometimes by clearinghouse arrangements established under OPER contract or grant (National Research Council 1975). Users of research products are quite diverse: policy officials within the secretary's office, other DOL agencies, prime sponsors for employment and training projects, vocational educators, labor unions, academics, and many others. One recent example of a widely circulated product was a monograph on women in work, which had a distribution of 18,000.

INTERAGENCY ACTIVITIES AND OVERSIGHT

In order to generate examples of significant cross-cutting approaches to income security problems, it is necessary to look back at the Office of Economic Opportunity experience. In part, OEO played a coordinating role because it had sufficient resources to act forcefully on research problems and in part because its independence from the narrower focus of operating agencies allowed it the freedom to act from a fresh perspective. An interesting example of this cross-cutting approach occurred at the time when passage of the Family Assistance Plan appeared imminent. OEO collaborated with ASPE and DOL in developing a research and evaluation strategy. The three agencies set up a two-part plan that would provide both internal program evaluation (administrative performance) and an analysis of the broader social and economic consequences. Subsequently, a group from the National Research Council was also included in discussions about an effective evaluation structure.

A collaborative effort of this scope was exceptional; such an effort now has become unlikely, as income security research fragments. Two executive agencies, the Domestic Council and OMB, could theoretically play a role in consolidating and directing income security R&D. The Domestic Council is dismissed quite readily on operational grounds; the pressure of day-to-day policy demands prevents its involvement in research questions in any level of detail. Moreover, the policy time horizon facing the Domestic Council inhibits its appreciation of long-range objectives for income security research. OMB, on the other hand, has greater potential to influence the direction of research in the income security field. Even on conceptual grounds, however, a conflict emerges. OMB's distance from day-to-day research issues provides a unique vantage over the policy landscape at the same time that it insulates the office from crucial operational research issues. In practice, OMB has forced agencies to put their individual programs in perspective and justify their research in terms of departmental objectives. However, OMB has not been effective in introducing cross-cutting or issue-oriented research initiatives. Finally, OMB has not consolidated research efforts and directed them in any systematic long-run framework.

AN ASSESSMENT

This study of social R&D and income security policy has proceeded from several general questions:

- What types of social R&D are supported by agencies involved with income security, and what levels of resources are allocated to social R&D?
- Who decides the levels of resources to be allocated to social R&D, who defines the problems to be addressed, and how are these decisions reached?
- Are potential users of R&D results involved in R&D decision making, and how are results made available to program managers or other interested parties?

As noted at the beginning of this paper, any generalization from this study will be limited by the diversity of organizations that have been included under the income security umbrella. Management practices in the Experimental Housing Allowance Program, for example, are based on a different set of historical practices, objectives, and bureaucratic processes from those of SSA. With this in mind, this study concludes with summary answers to the questions posed above.

THE LEVEL AND CONTENT OF SOCIAL R&D

Table 2-1 provides a review of expenditures for social R&D in income security agencies. As the table shows, ASPE supports a major R&D effort, largely extramural, which partly reflects initiatives begun under the OEO program. ASPE's major programs in this area include support of the income maintenance experiments, the Michigan Longitudinal Survey, and the Institute for Research on Poverty.

SSA supports a large and established intramural program that includes a substantial data-gathering capacity. On the basis of internal resources and research expertise, the SSA program is clearly the "Cadillac" of income security R&D, though it has been criticized for insularity and lack of creativity.

DOL supports a major employment-related R&D program through a number of divisions: ASPER, OPER, the Employment and Training Administration, the Bureau of Labor Statistics, the Labor Management Services Administration, and the Pension Benefit Guarantee Corporation. Since 1962, this program has included more than 2,000 projects under 17 programs with expenditures of more than $250 million.

Smaller components of social R&D in the income security system are the SRS program, the housing allowance programs in HUD, the Food and Nutrition Service in the Department of Agriculture, and the Office of Tax Analysis in the Department of the Treasury. The SRS program was dismantled in an HEW reorganization and thus does not represent a future consideration. Housing allowance research is based on research findings from a national experiment and an ongoing program. Two agencies with relatively small but unique substantive contributions to the income security system are the Food and Nutrition Service and the Office of Tax Analysis. Limitations on the scope of this study prevented detailed exposition of social R&D in these agencies.

The historical evolution of income security R&D reflects a considerable commitment to data collection, analysis, and research to provide a basis for policy formulation and program implementation. As a consequence, the nominal federal capacity to undertake a coherent R&D effort for the income policy area is substantial. However, the capacity is deficient in three major respects: (1) the common assumption that R&D should follow programs has resulted in considerable fragmentation of capacity, (2) the distinctive legislative and managerial history of the agencies in which R&D is located has resulted in an uneven development of the capacity to address various aspects of policy, and (3) formal arrangements to facilitate the development and implementation of a coherent R&D effort are virtually nonexistent, despite an attempt by the Office of the Assistant Secretary for Planning and Evaluation in HEW to meet this need.

THE PLANNING AND MANAGEMENT OF SOCIAL R&D

Management practices vary widely in the income security agencies. SSA, with a large intramural program, maintains a rigorous planning, review, and information structure. Although this approach clearly delineates the dimensions of the research effort, it may have disadvantages for the ultimate performance of research. Does the size of an institution stifle the creativity of its research effort? At what point does the justification of activities, resources, and detailed accountability become counterproductive?

On the other hand, our study indicated the need for serious and disciplined management in order to address policy-relevant questions. In the early 1970s, SRS was pursuing an unstructured research program that failed to integrate policy with program and research concerns. The subsequent attempt to deal with this shortcoming indicated a tradeoff between responsiveness to narrow program interests and the need for the policy-responsive setting of a research agenda.

Research on housing allowances appears to combine a positive interaction among program staff, researchers, and decision makers. In part this dialogue occurs because several key people have an understanding and appreciation for one another's tasks and requirements. Another important explanation for this interaction is that the research is taking place in an environment in which the demand is clearly evident; the research and its product will be a critical factor in the shape of federal housing allowance policy.

Budgetary constraints are important determinants of the shape of research efforts. Allocations are made through the budget process, with different research programs experiencing varying degrees of congressional visibility. ASPE research appears as a line item in the secretary's budget and is scrutinized by OMB and the Senate Appropriations Committee. With an appropriation determined, ASPE's research direction is further constrained by ongoing commitments to programs such as the Income Maintenance Experiments, the Michigan Longitudinal Survey, and the Institute for Research on Poverty.

Agencies are also exposed to varying degrees of political pressure on the use of their research budgets. Decision making in SRS, for example, has experienced political interference, particularly on such issues as the location of demonstrations. SSA, on the other hand, has had great freedom in the application of its large intramural resources.

The extramural programs that were studied indicated an emphasis on the use of contracts. This approach dictates considerable specificity and accountability, which is preferred at the administrative and management level. Sole-source contracts have lost popularity, primarily because of their associated political and legal hazards.

In addition to finding more or less effective research management at the agency level, this study has identified a major systemic failure to approach income security issues from a broad or issue-oriented perspective.

DISSEMINATION AND USER INVOLVEMENT

Involvement of R&D users in the decision-making process is the exception in the income security system. The best example of this exception is the housing allowance programs, in which a variety of performers and users are involved in research decision making. For the most part, users and researchers maintain their own turf, and little positive interaction takes place.

Rein and White (1977) have contrasted researchers' concern about the integrity of their work with users' motivations in a discussion of the "games of science" and the "games of politics" (p. 269):

> The games of science seek to establish patterns of experience that all may share. They are value-neutral in the sense that they are deliberately designed to filter out the values of the participants so as to arrive at the "unbiased truth." Best

> play in such games leads to assertions of findings that must be accepted by individuals whether they find them palatable or not. The proper posture for a gamesman of science must be one of restraint, dispassion, conservatism, the willingness to suspend belief pending more evidence. Now, the games of politics are different. They are designed to find one purpose or course of action acceptable to individuals who have begun the play by espousing diverse purposes, values, and actions. They are value-expressive, and facts enter in only as subordinated to and sustaining values, only as contributing to the delineation of an issue. Best play in such games leads toward the maximum possible satisfaction of one's purposes in the group action. The proper posture for a gamesman of politics is one of boldness, persistence, opportunism; the good gamesman is able to mobilize and sustain belief and commitment.

This fundamental difference in orientation precipitates conflict, which is manifested in the income security area over such issues as project lead time and the level of detailed information necessary to justify results.

Both formal and informal dissemination programs are used by the income security agencies. In no instance are results packaged across agencies or issues. Dissemination efforts are *ad hoc* and fail to systematically inform a broad audience that might use the results of research. In almost all agencies dissemination shortcomings are a major concern, and some significant effort to systematically distribute findings, at least within departments, may be forthcoming.

REFERENCES

Aaron, Henry J. (1977) *Politics and the Professors.* Washington, D.C.: Brookings Institution.

Bell, Carolyn Shaw (1975) Should every job support a family? *The Public Interest* 40.

Glennan, Thomas (1973) OEO Briefing Book. Unpublished.

Haveman, Robert (1976) *Poverty, Income Distribution, and Social Policy: The Last Decade and the Next.* Discussion paper no. 365-76. Madison: University of Wisconsin Institute for Research on Poverty.

Levine, Robert A. (1974) *How and Why the New Jersey Negative Income Tax Experiment Came About.* New York: Rand Institute.

Miles, Rufus E., Jr. (1974) *The Department of HEW.* New York: Praeger.

National Research Council (1971) *Policy and Program Research in a University Setting: A Case Study.* Advisory Committee for Assessment of University Based Institutes for Research on Poverty. Washington, D.C.: National Academy of Sciences.

National Research Council (1975) *Knowledge and Policy in Manpower: A Study of the Manpower Research and Development Program in the Department of Labor.* Committee on Department of Labor Manpower Research and Development. Washington, D.C.: National Academy of Sciences.

National Research Council (1979) *Evaluating Federal Support for Poverty Research.* Committee on Evaluation of Poverty Research. Washington, D.C.: National Academy of Sciences.

Pechman, Joseph A., ed. (1978) *Setting National Priorities: The 1979 Budget*. Washington, D.C.: Brookings Institution.

Rein, Martin, and White, Sheldon (1977) Belief and doubt. *Policy Analysis* 3(2):269.

Skidmore, Felicity (no date) The New Jersey Graduated Work Incentive Experiment and the Decisions that Shaped It. Unpublished paper.

Survey of Current Business (1978) 58 (February): 6.

U.S. Department of Housing and Urban Development *Housing Allowance: The 1976 Report to Congress*. Office of Policy Development and Research. Washington, D.C.: U.S. Department of Housing and Urban Development.

U.S. Office of Management and Budget (1976) *Special Analyses of the Budget*, p. 197.

Williams, Walter (1971) *Social Policy Research and Analysis: The Experience in the Federal Social Agencies*. New York: American Elsevier.

3 Health

JOHN M. SEIDL

INTRODUCTION

OVERVIEW

Growth in the Health Sector

During the twentieth century, especially since World War II, the nation's health expenditures have been increasing rapidly. Table 3-1 shows the growth in the health sector of the United States economy, which employs more than 4.7 million people and accounted for more than 8 percent of the United States gross national product (GNP) in fiscal 1975. During fiscal 1975, an estimated $119 billion was spent for health care and related activities, an increase of 14 percent over the previous year. Projections are that spending on health could amount to 10–12 percent of GNP by 1990 (U.S. Department of Health, Education, and Welfare 1975; Mueller and Gibson 1976).

A major increase in government health activities occurred with the enactment of the Medicare and Medicaid programs (Titles 18 and 19 of the Social Security Amendments of 1965). In fiscal 1966, government at all levels spent 26 cents of every medical care dollar. Within the public sector, state and local governments were spending roughly the same amount as the federal government. As Table 3-2 makes clear, Medicare and Medicaid changed these relationships significantly. By fiscal 1975, the public share had reached 42 cents, and almost the entire increase was in federal dollars.

TABLE 3-1 Gross National Product and National Health Expenditures, Selected Fiscal Years 1929–1975

		National Health Expenditures		
Fiscal Year	Gross National Product (GNP) ($billions)	Amount ($millions)	Percentage of GNP	Amount per Capita
1929	101.0	3,599	3.6%	29.16
1935	68.7	2,846	4.1	22.04
1940	95.1	3,863	4.1	28.83
1950	263.4	12,028	4.6	78.35
1960	495.6	25,856	5.2	141.63
1966	718.5	42,109	5.9	211.56
1970	954.8	69,202	7.2	333.57
1974	1,348.9	104,030	7.7	484.53
1975[a]	1,424.3	118,500	8.3	547.03

[a] Preliminary estimate.

SOURCE: Marjorie Smith Mueller and Robert Gibson (1976) National health expenditures, fiscal year 1975. *Social Security Bulletin* (February):6.

TABLE 3-2 Sources of Financing for Medical Care Expenditures ($millions)

Source of Funds	Fiscal 1966	Fiscal 1975[a]
Private	31,279	68,552
	(74.3)	(57.8)
Public[b]	10,830	49,948
	(25.7)	(42.2)
Federal[b]	5,381	33,828
	(12.8)	(28.6)
State and local	5,449	16,119
	(12.9)	(13.6)
Total	$42,109	$118,500
	(100)	(100)

[a] Preliminary estimates.

[b] Includes voluntary premium payments for supplementary medical insurance by or on behalf of enrollees.

SOURCES: U.S. Department of Health, Education, and Welfare (1975) *Medicare Care Expenditures, Prices and Costs: Background Book,* p. 11. Social Security Administration. Washington, D.C.: U.S. Department of Health, Education, and Welfare. Marjorie Smith Mueller and Robert Gibson (1976) National health expenditures, fiscal year 1975. *Social Security Bulletin* (February):7.

Price increases (inflation) continue to be the major contributor to the sharp rise in medical expenditures. Medical care prices as reflected in the Consumer Price Index greatly accelerated in 1975, as Table 3-3 shows. Note the contrast between the years when the economic stabilization program was in effect (August 1971–April 1974) and earlier and later years.

Hospital care continues to represent the largest category of health expenditures, approximately 40 percent in fiscal 1975. More than $46 billion was spent for care in hospitals, an increase over the previous year of 16.6 percent. Outlays for physicians' services were more than $22 billion, representing an increase of 12.9 percent compared with a 5.0-percent increase of a year earlier. Physicians' services is the second largest category of health expenditures, representing almost 20 percent of the total (Mueller and Gibson 1976).

Nursing-home care reached $9 billion in fiscal 1975, up 20.8 percent from 1974. In fiscal year 1975, personal health services made up 94 percent of health expenditures. The remaining 6 percent was for research and medical-facilities construction (Mueller and Gibson 1976).

The Changing Federal Role

In fiscal 1966, federal outlays for health were $5.4 billion (see Table 3-2); in fiscal 1977, the President's budget called for $45.9 billion in outlays.[1] In fiscal 1966 somewhat more than one-third of these expenditures were for the development of health resources including research, training, and construction of facilities. In fiscal 1977, it was estimated that this proportion would fall to about 13 percent. Health expenditures before fiscal 1966 were focused largely on public health and the development of health resources; almost the entire eight- to nine-fold increase in the ensuing eleven years has been in the Medicare and Medicaid programs that finance personal health services. The targeted groups are those that Congress and the executive agencies believe are inadequately protected by private insurance—the aged, the poor, and the disabled.

This increase in federal activity has been accompanied by a change in our perception of the federal role in health and health problems. Federal programs in the health sector reflect the cumulative outcome of a series of incremental decisions. The initiatives fall into three broad classes. First, in a historical sense, are the public health initiatives concerned with the prevention of communicable diseases and the regulation of

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[1] This figure includes health expenditures in all federal agencies, not just in the Department of Health, Education, and Welfare (U.S. Office of Management and Budget 1976).

TABLE 3-3 Medical Care Prices (fiscal 1965–1975)

Fiscal Year	Percentage Increase				
	Consumer Price Index, All Items	Total Medical Care	Hospital Service Charge	Hospital Semi-Private Room Charges	Physicians' Fees
1965	1.3	2.1	—	5.3	3.1
1966	2.2	2.9	—	6.1	3.9
1967	3.0	6.5	—	17.3	7.4
1968	3.3	6.4	—	15.9	6.1
1969	4.8	6.5	—	13.5	6.2
1970	5.9	6.4	—	12.8	7.2
1971	5.2	6.9	—	13.3	7.5
1972	3.6	4.7	—	9.4	5.2
1973	4.0	3.1	3.2	5.0	2.6
1974	9.0	5.7	7.9	6.0	5.0
1975	11.0	12.5	15.4	16.4	12.8

SOURCE: Marjorie Smith Mueller and Robert Gibson (1976) National health expenditures, fiscal year 1975. *Social Security Bulletin* (February):3.

hazardous products or environments. The success of these initiatives in reducing the incidence of communicable diseases is well known. Their effectiveness in controlling hazards to health in fields in which public and private values clash—food, drugs, and product safety, for example—remains mixed. Moreover, they now account for only 3 percent of federally financed health expenditures (U.S. Office of Management and Budget 1976).

Second are the initiatives primarily concerned with strengthening the private health treatment system, including clinics and centers run by communities. These initiatives undertaken by the federal government are designed to increase our knowledge about health problems and to expand the resources devoted to the nation's health. They are of four kinds, all of which acquired importance after World War II. The earliest and still largest in dollar terms is the support of biological and social science research. This is followed by initiatives to expand health care facilities, primarily funds for the construction of hospitals, to expand the supply of health personnel, partially subsidizing the education and training of health professionals and paraprofessionals. Finally, a wide variety of institutional innovations has been supported that are intended to improve the use, quality, and rationality of the health care delivery system. In total, these resource initiatives now account for about 13 percent of federal outlays for health (U.S. Office of Management and Budget 1976).

Third are the initiatives that resulted in the current federal role in paying for health care. These are of two kinds. The earliest programs supported direct provision of health care for specific federal beneficiaries, such as veterans, armed service personnel, and the merchant marine. In the 1960s, programs providing indirect payment for health care to major segments of the population—the aged, the disabled, and the poor—were initiated. These payments were supported in part by payroll taxes and in part from general revenues. Payments for health care now account for more than 84 percent of all federal outlays for health; indirect payments are five times larger than direct payments (U.S. Office of Management and Budget 1976).[2]

The U.S. Department of Health, Education, and Welfare (HEW) has the central role in health policy development and implementation. There is a line assistant secretary for health whose office has produced two consecutive five-year plans for 1976–1980 and for 1977–1981. However, three major program areas are outside his authority, one outside HEW (the Veterans Administration) and two within HEW (Social Security and Medicaid).

The Social Security Administration administers the Medicare program. Medicaid is the responsibility of the Medical Services Administration, a separate program area in the Social and Rehabilitation Service, another HEW agency. Finally, a crucial part of federally supported health research, assuming the importance of environmental life-style factors, exists outside HEW altogether and seldom gets considered in the health care context. Various environmental health concerns are lodged in the Environmental Protection Agency and the Department of Transportation and the Development of Agriculture (see Seidl, "The Living Environment," in this volume).

In the face of rising expenditures in the financing area—Medicare and Medicaid—the White House and the Office of Management and Budget (OMB) have been working in recent years to carve back the public health service appropriation; cutbacks have been proposed in research, training, service delivery subsidies, and construction. Congress, on the other hand, has added to the president's budget, restoring some of the program funds that had failed to pass OMB's muster.

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[2] If the view that some form of national health insurance is likely to be enacted in the near future proves to be correct, the proportion of federal health outlays devoted to payment for health services seems likely to rise, as will the percentage of the GNP devoted to health.

TABLE 3-4 Social R&D Obligations for Health ($thousands)[a]

Policy Area	Fiscal 1975	Fiscal 1976	Fiscal 1977
Health education	39,556	39,356	38,964
Health care delivery and services	119,148	133,646	120,011
Prevention and control of health problems	29,468	31,665	42,974
Environmental health	3,549	2,960	3,309
Mental health	34,110	32,322	28,660
Substance abuse, prevention, and rehabilitation	50,486	49,796	47,741
Food and nutrition	74,848	73,886	74,366
Consumer safety	7,347	6,886	7,193
Health miscellaneous	55,201	57,679	60,785
TOTAL	413,713	428,196	424,003

[a] The figures in this table were developed by the Study Project on Social Research and Development. For more detailed information, see Mark A. Abramson (1978) *The Funding of Social Knowledge Production and Application: A Survey of Federal Agencies.* Study Project on Social Research and Development, Vol. 2. Washington, D.C.: National Academy of Sciences.

SOCIAL RESEARCH AND DEVELOPMENT

Federal funding for health-related R&D is spread across some 50 agencies and amounted to more than $2.4 billion in fiscal 1975, $2.8 billion in fiscal 1976, and $3.0 billion in fiscal 1977 (U.S. Office of Management and Budget 1976). Over $400 million of this was for social R&D. In order to organize federally financed health-related R&D into elements amenable to description and analysis, nine policy areas or subjects for research have been designated. Table 3-4 provides a breakdown of health-related social R&D obligations by policy area for fiscal 1975-1977.

Table 3-4 shows that social R&D expenditures are rather evenly distributed across seven policy areas; environmental health and consumer safety research amount to less than 2 percent each in the three fiscal years.[3]

Health care delivery and services and food and nutrition are the two largest policy areas for each of the three years. In the case of food and nutrition research, the Extension Service in the Department of Agricul-

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[3] Environmental health research may have been slightly underestimated in this survey owing to the failure of the Environmental Protection Agency (EPA) to report any of its social research in the health policy area; EPA research was largely reported under the natural resources and environmental categories.

TABLE 3-5 Social R&D Obligations for Health Education ($thousands)[a]

Agency	Fiscal 1975	Fiscal 1976	Fiscal 1977
Department of Health, Education, and Welfare			
Assistant Secretary for Planning and Evaluation	208	400	400
Center for Disease Control	1,956	2,089	2,263
Health Resources Administration	31,726	28,334	26,305
National Institutes of Health	4,954	5,394	5,146
Total	38,844	36,217	34,114
Department of Agriculture	200	200	250
Agency for International Development	512	2,451	4,600
Veterans Administration	—	488	—
TOTAL	39,556	39,356	38,964

[a] The figures in this table were developed by the Study Project on Social Research and Development. For more detailed information, see Mark A. Abramson (1978) *The Funding of Social Knowledge Production and Application: A Survey of Federal Agencies.* Study Project on Social Research and Development, Vol. 2. Washington, D.C.: National Academy of Sciences.

ture accounts for more than 95 percent of the obligations in each fiscal year; the small remainder is obligated by the Department of Agriculture's Food and Nutrition Service and the Agency for International Development in the Department of State.

Tables 3-5–3-10 provide a breakdown of health social R&D policy areas by federal agency for three fiscal years. We have included six areas. The Food and Nutrition Service is not included because it is lodged largely in one agency, and neither consumer safety nor health miscellaneous seemed to warrant a separate table.[4] The figures are based on the survey carried out in 1976 by the Study Project on Social Research and Development (see Abramson 1978). No attempt was made to define the policy areas beyond their titles, and consistency in reporting within a federal agency was achieved by using only one researcher to compile the data. Nevertheless, these are not precise figures,

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[4] The bulk of health miscellaneous expenditures are in the National Institutes of Health, with a scattering throughout other HEW agencies, the Department of Agriculture, the Department of the Interior, and the Agency for International Development. Consumer-safety expenditures are found in the Consumer Product Safety Commission and the Food and Drug Administration.

TABLE 3-6 Social R&D Obligations for Health Care Delivery and Services ($thousands)[a]

Agency	Fiscal 1975	Fiscal 1976	Fiscal 1977
Department of Health, Education, and Welfare			
Assistant Secretary for Planning and Evaluation	5,463	6,090	7,200
Health Resources Administration	42,605	38,901	31,908
Health Services Administration	40,497	52,210	45,414
National Institutes of Health	1,943	1,487	1,409
Administration on Aging	2,860	2,807	500
Social and Rehabilitation Service	2,582	2,780	3,000
Office of International Health	—	5	—
Social Security Administration	12,440	26,727	16,917
Assistant Secretary for Health	365	581	581
Total	108,755	121,588	106,929
Agency for International Development	4,353	3,787	5,578
Appalachian Regional Commission	4,208	3,484	3,200
National Science Foundation	—	1,200	1,200
TOTAL	119,148	133,646	120,011

[a] The figures in this table were developed by the Study Project on Social Research and Development. For more detailed information, see Mark A. Abramson (1978) *The Funding of Social Knowledge Production and Application: A Survey of Federal Agencies.* Study Project on Social Research and Development, Vol. 2. Washington, D.C.: National Academy of Sciences.

and the crispness of the tables should not lead one to presume that these are more than ballpark figures.

THE SCOPE OF THE STUDY

From the more than 50 federal organizations supporting health-related R&D, five agencies were chosen for study. The five agencies were selected to represent differing categories of social R&D, differing management styles, differing levels within the policy hierarchy and the bureaucracy, and differing degrees of congressional and executive support. All the agencies studied are part of HEW. HEW is clearly the largest spender in health R&D, spending an average of 74 percent of total expenditures in fiscal 1974–1977.

The National Institutes of Health was chosen as the first of the five agencies because it is easily the largest spender in health R&D. Although

TABLE 3-7 Social R&D Obligations for Prevention and Control of Health Problems ($thousands)[a]

Agency	Fiscal 1975	Fiscal 1976	Fiscal 1977
Department of Health, Education, and Welfare			
Center for Disease Control	389	416	450
Food and Drug Administration	2,747	2,684	2,484
National Institutes of Health	6,666	6,521	7,094
Assistant Secretary for Health	469	747	747
Total	10,271	11,368	10,775
Department of Labor			
Occupational Safety and Health Administration	18,717	19,597	32,119
TOTAL	29,468	31,665	43,974

[a] The figures in this table were developed by the Study Project on Social Research and Development. For more detailed information, see Mark A. Abramson (1978) *The Funding of Social Knowledge Production and Application: A Survey of Federal Agencies.* Study Project on Social Research and Development, Vol. 2. Washington, D.C.: National Academy of Sciences.

TABLE 3-8 Social R&D Obligations for Environmental Health ($thousands)[a]

Agency	Fiscal 1975	Fiscal 1976	Fiscal 1977
Department of Health, Education, and Welfare			
Center for Disease Control	2,875	1,929	2,181
Assistant Secretary for Health	209	332	332
Total	3,084	2,261	2,513
Department of Commerce	465	699	796
TOTAL	3,549	2,960	3,309

[a] The figures in this table were developed by the Study Project on Social Research and Development. For more detailed information, see Mark A. Abramson (1978) *The Funding of Social Knowledge Production and Application: A Survey of Federal Agencies.* Study Project on Social Research and Development, Vol. 2. Washington, D.C.: National Academy of Sciences.

TABLE 3-9 Social R&D Obligations for Mental Health ($thousands)[a]

Agency	Fiscal 1975	Fiscal 1976	Fiscal 1977
Department of Health, Education, and Welfare			
National Institute of Mental Health	30,209	30,378	26,984
Assistant Secretary for Planning and Evaluation	—	150	200
National Institutes of Health	69	76	73
Administration on the Aging	250	500	—
Total	30,528	31,104	27,257
Department of Defense	3,582	1,218	1,403
TOTAL	34,110	32,322	28,660

[a] The figures in this table were developed by the Study Project on Social Research and Development. For more detailed information, see Mark A. Abramson (1978) *The Funding of Social Knowledge Production and Application: A Survey of Federal Agencies.* Study Project on Social Research and Development, Vol. 2. Washington, D.C.: National Academy of Sciences.

TABLE 3-10 Social R&D Obligations for Substance Abuse Prevention and Rehabilitation ($thousands)[a]

Agency	Fiscal 1975	Fiscal 1976	Fiscal 1977
Department of Health, Education, and Welfare			
National Institute on Alcohol Abuse and Alcoholism	15,941	12,968	10,777
National Institute on Drug Abuse	34,365	36,640	36,784
Total	50,306	49,608	47,561
Veterans Administration	180	188	180
TOTAL	50,486	49,796	47,741

[a] The figures in this table were developed by the Study Project on Social Research and Development. For more detailed information, see Mark A. Abramson (1978) *The Funding of Social Knowledge Production and Application: A Survey of Federal Agencies.* Study Project on Social Research and Development, Vol. 2. Washington, D.C.: National Academy of Sciences.

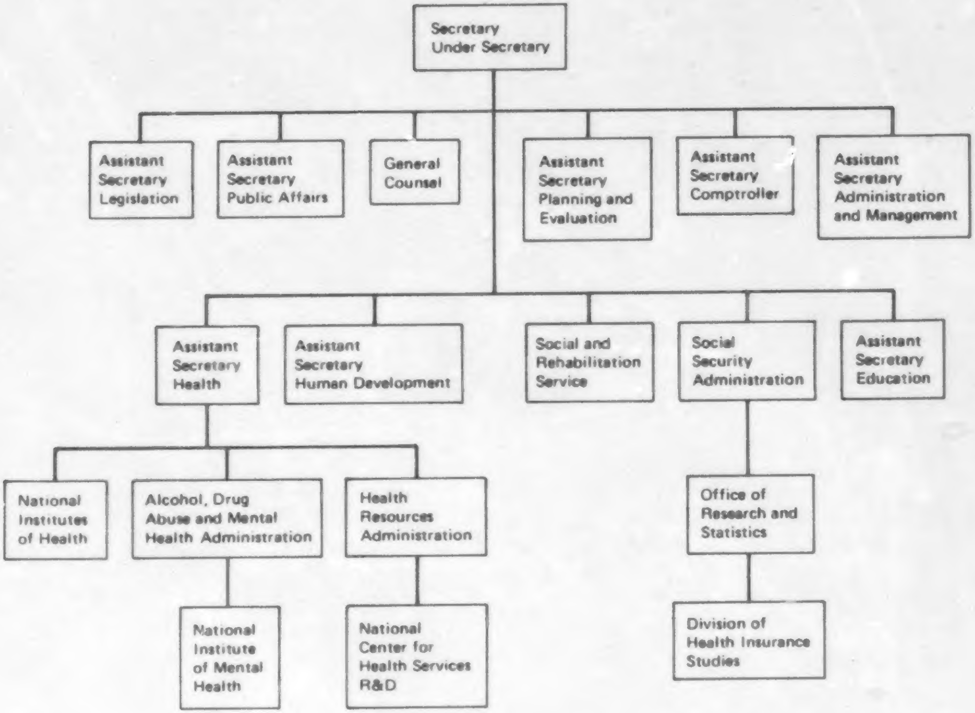
Secretary
Under Secretary
Assistant Secretary Legislation
Assistant Secretary Public Affairs
General Counsel
Assistant Secretary Planning and Evaluation
Assistant Secretary Comptroller
Assistant Secretary Administration and Management
Assistant Secretary Health
Assistant Secretary Human Development
Social and Rehabilitation Service
Social Security Administration
Assistant Secretary Education
National Institutes of Health
Alcohol, Drug Abuse and Mental Health Administration
Health Resources Administration
Office of Research and Statistics
National Institute of Mental Health
National Center for Health Services R&D
Division of Health Insurance Studies

FIGURE 3-1 Department of Health, Education, and Welfare Organizational Chart

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its primary mission is supporting biomedical research in categories oriented to disease, it supports a significant amount of social R&D in the National Cancer Institute, the National Heart, Lung, and Blood Institute, the National Institute for Child Health and Human Development, and the National Institute on Aging. More importantly, however, the National Institutes of Health plays the lead role in the health research drama by virtue of its size, tradition, organizational structure, and management style.

The National Institute of Mental Health (NIMH) was selected because it is the largest institute of the Alcohol, Drug Abuse, and Mental Health Administration, the second largest health R&D spender in HEW. NIMH has a unique role; it not only supports a wide-ranging social R&D effort (in addition to its biomedical research) but it operates a major service program, the Community Mental Health Centers.

The third agency, the National Center for Health Services Research, was established by administrative directive in 1968 to serve as a focal point of federal efforts to improve the nation's health services through research and development. It has had a short history that includes significant funding cutbacks within the past three years. The center is concerned solely with social R&D; together with its mission, that is why it was selected. Additionally, it is a social R&D program without (until recently) an intramural research effort.

The National Institutes of Health, the National Institute of Mental Health, and the National Center for Health Services Research are all part of HEW's Public Health Service and report to HEW's assistant secretary for health through varying levels of officialdom. Figure 3-1 is the organizational chart for health research at HEW. We chose a fourth organization outside both the Public Health Service and the control of the assistant secretary for health—the Division of Health Insurance Studies within the Social Security Administration's Office of Research and Statistics—because of its unique organizational features. It is part of the Social Security Administration (SSA), the government's largest agency below the cabinet level. The division is part of SSA's Office of Research and Statistics, which has an impeccable research reputation built entirely on intramural efforts and whose expenditures compared with SSA's total budget are minuscule. Additionally, SSA's programs are funded through earmarked taxes deposited in trust funds that were considered separately from the rest of the president's budget by OMB and Congress until the late 1960s. The division is also changing its research strategy somewhat by funding large new health initiatives through contracts rather than the traditional intramural approach.

The Office of the Assistant Secretary for Planning and Evaluation was the fifth selection because of its close proximity to key HEW policy makers and its efforts in health evaluation and the health insurance experiments, which were earlier lodged in the Office of Economic Opportunity. It was its combination of social experimentation and policy position that suggested that this agency should be one of the five R&D organizations investigated in detail.

NATIONAL INSTITUTES OF HEALTH

THE LEVEL AND CONTENT OF SOCIAL R&D

Over the past 30 years, the National Institutes of Health (NIH) has grown from a small microbiology laboratory into a vast complex of 11 institutes that supports most of the nation's biomedical research. The 300-acre campus in Bethesda, Maryland, houses the institutes' administrative headquarters as well as hundreds of laboratories, a 516-bed research hospital, the John E. Fogarty International Center, and the National Library of Medicine. In fiscal 1976, NIH spent over $2 billion in support of its mission to improve the health of all Americans—nearly two-thirds of the total federal investment in health R&D.

Social R&D does not make up a particularly large percentage of NIH expenditures. In fiscal 1977, NIH obligated $1.95 billion for R&D; of that total, $68 million was for social R&D.

During the past decade, NIH real-dollar expenditures for contract research have increased by more than 500 percent, while grant expenditures have increased by about 30 percent. Currently, about 70 percent of NIH extramural research is supported with research grants, 30 percent with contracts. Colleges and universities receive approximately 80 percent of the extramural grant funds, with most of the projects located in university health facilities, primarily medical schools. The remaining extramural support, less than 20 percent, goes to private and not-for-profit research institutes and hospitals. Two-thirds of all contracts are awarded to not-for-profit institutions, primarily colleges and universities and research institutes. The remaining third is channeled into for-profit corporations, primarily industrial firms.

A sampling of the social research projects undertaken in the four institutes with the largest social R&D components includes:

- *National Cancer Institute:* Legislatively mandated social R&D activities in behavioral studies of cancer patients—attitudes toward treatment, rehabilitation, and death; research on attitude and behavior change; and studies on smoking.

- *National Heart, Lung, and Blood Institute:* Primarily centered in the hypertension program, focusing on prevention and education; also studies of attitude change.
- *National Institute for Child Health and Human Development:* Studies of growth, health, and development; intellectual and social development; and learning disabilities; also studies of the socioeconomic, psychological, and cultural factors that influence family planning.
- *National Institute on Aging:* Social R&D focuses on the social, psychological, and economic adjustment factors associated with aging.

THE PLANNING AND MANAGEMENT OF SOCIAL R&D

Since the preponderance of R&D at NIH is biomedical, we originally speculated that NIH management was not necessarily relevant to social R&D management in the other health agencies. The initial interviews quickly dispelled this belief; many of NIH's management techniques have been adopted in other health R&D agencies. The use of outsiders and the two-stage grant review process that characterizes NIH is an important feature in much of the health-related research management in other parts of HEW. This system is an important means of involving outsiders in the operation of the R&D funding agency and provides some opportunity to separate concerns of scientific merit from those of problem relevance. Both the National Center for Health Services Research and the Alcohol, Drug Abuse, and Mental Health Administration use such review procedures, in part because their antecedents were in NIH. Furthermore, NIH's prestige and tradition place it in a pivotal position in health research and make it a role model against which other R&D managers compare their successes and failures.

Yet within NIH there are conflicting opinions about the appropriate methods for managing R&D. Thus, if one understands the management tensions at NIH, one can begin to understand the major tensions and options in other health research organizations and, for that matter, research organizations throughout the federal government.

Conflicting Management Philosophies

A two-stage review process, which first evaluates the scientific merit of proposals and then assigns each to one of NIH's 11 institutes, seems to have been a good means by which to accomplish the balance required between the two major emphases in NIH: disease-oriented activities and science-directed inquiry. In the period of rapid growth of funds, the needs of all comers could be dealt with adequately. Enough promising breakthrough could be brought out in the appropriations committee hearings each year to provide institutes with continuing increases, often the result of the more-than-sympathetic support of the appropriations subcommittee chairmen.

In the early 1970s the uneasy partnership of the science and disease factions began to come apart, and the dramatic reduction in the rate of increase of expenditures brought conflict to a head. The financial crunch grew from the Vietnam War, vast expansion of social welfare expenditures, inflation, and recession. Additionally, a number of activities and decisions during the earlier years exacerbated the financial squeeze at NIH. The "growth years," which had been characterized by a continual overriding of the budgetary wishes of the executive branch, had created a number of NIH "enemies." Elements within HEW and OMB as well as within other parts of the health establishment believed that the increasing support for NIH was unbalancing the federal resources allocated to health and expanding NIH at a rate that would not permit good management and productive use of the extra funds: a goliath was being created that would continue to have an increasing, uncontrollable, and insatiable appetite for funds. The promises that were necessary to secure these larger budgetary increases began to create expectations that something would happen: that cancer or heart disease, for example, would be cured. Thus after about 10 years with tangible results not easily distinquished by the public, some degree of frustration was voiced among supporters, who had wanted and expected a war to be won.

These congressional and bureaucratic pressures on the director of NIH and his staff were increased even more by the desires of those who supported the growth of NIH in the interest of conquering disease. The result was a battle over increased funding for the National Cancer Institute. The disease-oriented advocates wanted more targeted funding; the science-oriented faction opposed further increases, arguing that the scientific community could not absorb additional funding productively.

Thus, by the early 1970s, many of NIH's critics and an influential group of its supporters wanted clearer attacks on what they were convinced were important potential breakthroughs; some also wanted more massive attacks. Congress asked for plans and more targeting of research. OMB and the economists and analysts in HEW had been advocates of planning all along; when the financial squeeze set in and Congress requested plans, they pushed even harder for more directed, controlled research management at NIH. Thus, in the early 1970s, contracting grew significantly, particularly in the politically visible institutes—the

National Heart, Lung, and Blood Institute and the National Cancer Institute. As one might expect, the science-based forces fought back.

DeWitt Stetten, NIH deputy director for science and a former director of the Institute of General Medical Sciences, summed up the traditional science-based position with the following tale (Stetten 1974, p. 209):

> A target, we may take it, is a special kind of a goal. It is well defined and clearly visualized, falling within the direct line of sight of the eye or, at the very least, of the mind's eye of the observer. He knows beforehand what the target looks like and has ways of ascertaining whether a hit has been scored. He need only muster his task force, assemble his ammunition, determine his strategy, and bang away.
>
> From the pages of history comes an anecdote that may prove illustrative. During the War of 1812, an arm of the British Royal Navy was cruising in Chesapeake Bay. At dusk on the evening of 10 August 1813, the ships approached the harbor of the modest fishing village of St. Michaels, on the Eastern Shore of Maryland. The British command, sensing that it had found a vulnerable target, neglected to send a spy ashore to case the joint. It therefore did not learn that the villagers, aware of their peril, had all agreed to extinguish every light in the village and hang all available lanterns on the branches of trees in a nearby forest. The ruse worked magnificently, and all night long the British ships lobbed cannonballs, most of which fell harmlessly among the trees. St. Michaels is known to this day as "The town that fooled the British."
>
> The morals of this tale are self-evident.
>
> 1) The identification of the proper target may be more difficult than is generally supposed.
>
> 2) Aiming at the wrong target can be enormously costly in terms of ammunition and other resources.
>
> 3) In selecting a target, one should secure and study the latest and most sophisticated available information. This conclusion is equally true whether the target be military or scientific.

As the debate between the advocates of differing points of view has continued, there have been victories on both sides. NIH, like the National Science Foundation, was created with the idea that competence to decide what to do and how to do it would remain outside government program agencies.[5] Thus the elaborate set of study sections and advisory groups that surround the NIH has been central to its operation. Indeed, according to some descriptions of this system, one could imagine all the government employees being replaced by clerks or computers: all scientific evaluations being made by outsiders. This, of course, is a fiction. There are important roles that always have been played by study section executive secretaries or by program staff in the institutes, serving as catalysts, as communicators, as conveners. Nonetheless, the importance of the outsiders is significant and provides important elements of continuity, vitality, renewal (through turnover of appointments), and legitimacy to the decisions of NIH.

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[5] This does not include, of course, the intramural program.

The Review Process

NIH is the prototype of the dual or two-stage grant review process. The origin of the NIH dual review method can be traced to the Biologics Control Act of 1902, which established an Advisory Board of scientific experts outside government to advise the director of the Hygienic Laboratory—the forerunner of NIH. When the National Cancer Institute was established in 1937, it was patterned after the Hygienic Laboratory, including an advisory board in the form of a National Cancer Advisory Council. This marked the first time that an advisory body of scientists outside government was given the authority to approve extramural research grants.

All incoming grants are submitted to the Division of Research Grants. The division processes grant applications all year long, but there are three new grant deadlines each year. It examines each grant to determine the research area and assigns all applications to a specific institute and to an initial review group or study section. Study sections are largely organized according to disciplines, such as cell biology, pathology, or biochemistry, although a few are multidisciplinary; they are composed of 10–15 scientists who work for the most part outside the federal government. The executive secretary of the study section receives the application and generally assigns it to three study section members for in-depth review. The executive secretary also determines if a site visit is necessary—about 15 percent of all applicants are visited before the study section review.

Following this initial sorting and review, the study sections meet to evaluate the applications on the basis of scientific merit, methodology, and competence of the investigators; typically each proposal is discussed for a half hour. After discussion, members vote to approve or disapprove each application. If an application is approved by a majority, each member then assigns a score of one to five to each application. The numerical average of these scores multiplied by 100 becomes the priority score. The Division of Research Grants normalizes these averaged scores among study sections and delivers each proposal to its assigned institute. Thus the study sections have a key role in the selection process, determining from the start which proposals are approved with what priority scores. Review processes that come later can only change priorities or approvals by overturning study section decisions.

The national advisory council of each institute is convened to review and approve that institute's proposals. Applications must receive advisory council approval before funding can be awarded. Members of an institute's advisory council are appointed by the secretary of HEW for a four-year term. Half of the members must be authorities in the scientific and health fields directly related to the program interests of the institute; the other half are lay members, selected for their interest or activity in institute-related problems.

The councils receive the recommendations of the study section and review the applications against a rather broad set of criteria that includes determination of needs, relevance to mission, need for initiation of research in new areas, and other "matters of policy." Institute program directors lead the discussion, highlighting those applications that the program staff has sorted out for special attention, a procedure that gives the institute staffs important power in the selection process. The council reviews a few applications in detail and chooses, through voting, one of four options for each of the proposals: recommend disapproval, return the application to the same or a different study section for additional review, recommend approval, or recommend approval and high priority rating, which involves replacing the study section's assigned priority score with a five. The council makes its recommendations to the institute director, who has final authority in funding decisions. Although directors are the ultimate decision makers within the institutes, they seldom act unilaterally. NIH institute directors function as brokers, bridging gaps among institute program managers and staff, the advisory councils, and the scientific investigators.

Over the years, the advi[illegible]uncils have endured criticism from both science-based and disease-based factions. The scientists complain that the councils are too political, too eager to set aside the reasoned judgments of scientific merit handed down by study sections in order to respond to faddish areas of interest with high visibility. The disease-based groups complain that the advisory councils are little more than a rubber stamp, concurring with the judgments of the study sections and backing away from enforcing criteria of relevance and timeliness in research design and investigation.

Turning to contracts, responses to an institute-generated request for proposal (RFP) are subject to a different but fairly standard set of review procedures. Except for routine procurement contracts, all contract applications must be reviewed by competent scientific advisers, who form the technical merit review group for a given RFP. About 25 percent of the group members are not federal employees, and the federal procurement regulations are followed. There appears to be little inter-institute consistency with regard to the type and composition of technical merit review groups beyond the 25-percent inclusion of nonfederal employees. Institute directors have the final responsibility for making contract awards, but the recommendations of the technical review groups weigh heavily in these decisions. There is much greater variability among institutes in the processing of a contract proposal than in the processing of a grant proposal.

To redirect activity from contracts to grants, the National Cancer Institute recently established the Cancer Research Emphasis Grant (CREG). The institute prepares solicitations similar to, but more general than, an RFP. One or more proposals may be funded as a result of a CREG solicitation.

Advisory councils play no role in contracting, although NIH will soon mandate peer review of the "concept" behind each contract, and the review responsibility will fall to the advisory councils. This is a step that the director's office at NIH has been advocating for some time.

Intramural Research

The NIH intramural research program claims almost 11 percent of the total NIH budget and about 70 percent of the personnel (including 3 Nobel laureates). All the institutes except the Institute of General Medical Sciences support intramural research but almost no social R&D. The intramural research program is managed with a "light touch." Laboratory and branch chiefs meet with the institute scientific director to discuss research direction, but for the most part the research is guided by scientific opportunity and a faith in the motivation of the researcher to "do good research." Individual institute programs of research are almost indistinguishable at the intramural level. It seems that the closer one moves to pure science, the more hazy institutional boundaries become. For example, some of the most meaningful basic research in diabetes is being conducted by intramural scientists affiliated with the National Institute of Dental Research because of the competence of the researchers and their methodological approach.

The management philosophy in the intramural program reflects the essence of NIH: hire the best people and give them freedom to do their research. In the late 1960s and early 1970s, there was much excitement and activity in the NIH intramural program. A number of bright, young physicians chose to fulfill their military obligation by serving at NIH instead of in the Army. This created turnover and an infusion of new thinking and vigor; however, today the intramural program is characterized more by inertia. Laboratory space, monies, and people are fixed; programs are set. There is little turnover, and the only real opportunity to modify programs comes when researchers retire or resign.

DISSEMINATION AND USER INVOLVEMENT

Dissemination of the results of NIH-sponsored research is the responsibility of the individual investigator. The control programs of the National Cancer Institute and the National Heart, Lung, and Blood Institute were congressionally mandated to bridge the gaps between the most visible research programs and the citizen.[6] However, dissemination is generally viewed by NIH administrators as not their responsibility and, therefore, an unnecessary function at NIH. Institutes contribute to the dissemination of knowledge indirectly through university medical schools, and NIH administrators believe that researchers have strong continuing incentives to publish the results of their work. In the view of NIH research managers, academic promotion and the peer review system provide the incentives for adequate dissemination.

NATIONAL INSTITUTE OF MENTAL HEALTH

THE LEVEL AND CONTENT OF SOCIAL R&D

In July 1946, President Truman signed the National Mental Health Act, outlining federal responsibilities in mental health and authorizing the establishment of a National Institute of Mental Health (NIMH).[7]

The stated purpose of the act is the improvement of the mental health of the people of the United States through research, investigations, experiments, and demonstrations relating to the cause, diagnosis, and treatment of psychiatric disorders; assisting and fostering such research activities by public and private agencies and promoting the coordination of all such research and the useful application of its results; training personnel in matters relating to mental health; and developing and assisting states in the use of the most effective methods of prevention, diagnosis, and treatment of psychiatric disorders.

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[6] The Cancer Control Program plans, directs, and coordinates an integrated program of cancer control and rehabilitation activities (e.g., breast cancer screening clinics). The goal of the program is to identify, test, evaluate, demonstrate, communicate, and promote the widespread application of available new methods for reducing the incidence, morbidity, and mortality from cancer.

[7] Congress adjourned on the day the National Mental Health Act was signed by the President without appropriating any funds for the operation of the new institute. The National Institute of Mental Health was not actually established until April 1949, when the Division of Mental Hygiene of the Public Health Service was abolished.

In keeping with the emphasis placed on psychiatric disorders in the act, the original House bill had been entitled the National Neuropsychiatric Institute Act. However, during passage through Congress, the names of both the act and of the institute were changed in order to allow scope for activities encompassing the entire area of mental health.[8]

The institute's charge was unique. It was the first of the federal health agencies to have responsibility for research, training, and service activities. This broad initial mandate led to the development of heterogeneous programs of basic, clinical, and applied research; training programs for research scientists and mental health professionals; and the development of service delivery programs.

Research projects supported by NIMH represent an enormous diversity in approaches, subjects, disciplinary orientations, and goals. The institute is composed of six divisions, St. Elizabeth's hospital, and an intramural research program.

The Mental Health Intramural Research Program, accounting for about 20 percent of total institute research outlays, conducts primarily biomedical research on the causes, treatment, and prevention of mental disorders and on the role of biological and psychosocial factors in human behavior and development. Intramural labs are located on the NIH campus, at St. Elizabeth's hospital, and at a special facility in Poolesville, Maryland. The proportion of social R&D activity in the intramural program is relatively small.

Social R&D is supported in three divisions, the Division of Extramural Research Programs, the Division of Special Mental Health Programs, and the Division of Mental Health Service Programs.

The Division of Extramural Research Programs fits the NIH mold better than any other research division at NIMH. The bulk of R&D is basic research, about half biological and biomedical and half psychological and sociocultural, supported through investigator-initiated grants. Nearly 70 percent of the research focuses on the causes and prevention of mental illness and less than 20 percent on amelioration and treatment of mental health problems. The remaining 10 percent deals with diagnosis, service delivery, and dissemination activities.

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[8] Subsequent legislation added a number of specific social problems to be addressed by the institute, including alcoholism, drug addiction, juvenile delinquency, broken homes, school failures, absenteeism and poor job adjustment in industry, and suicide.

The Division of Special Mental Health Programs serves as the focal point for institute activities in specific social problem areas. It supports applied social R&D project grants. The division is composed of total centers and coordinating centers. Total centers administer grant funds for comprehensive programs of research, training, and technical service assistance aimed at critical national needs. Coordinating centers lack grant authority and serve to direct interested research-, training-, or service-related people toward sources of funding—linking people with needs to resources. Currently the division has four total centers: Crime and Delinquency, Metropolitan Problems, Minority Group Mental Health, and the recently congressionally mandated National Center for the Prevention and Control of Rape. Two coordinating centers exist—Child and Family Mental Health and Aging—as well as a coordinating section on mental health disaster assistance.

as well as a coordinating section on mental health disaster assistance.

It was not until 1956, with the passage of amendments to the National Mental Health Act authorizing funds to "support studies, experiments, and demonstrations to improve services for the mentally ill and to promote mental health," that services research became a separate, identifiable program within NIMH (U.S. Department of Health, Education, and Welfare 1975).

The bulk of NIMH research is supported through extramural grants. Colleges and universities receive the largest proportion of research grants and the greatest percentage of funds. NIMH does support some contracts for evaluations, surveys, and dissemination activities. Contracts compose about 10 percent of the total institute research budget and are supported from direct operations appropriations and a standard 1 percent of program operation funds for evaluation—known as evaluation set-asides. The institute occasionally reprograms grant money, applying it for contract support; however, only in cases in which detailed explanations pass the muster of both the institute director and congressional appropriations subcommittee does such reprogramming take place.

THE PLANNING AND MANAGEMENT OF SOCIAL R&D

NIMH's broad mandate and its wide-ranging research portfolio, particularly in areas in which scientific methods that lead to verification by other researchers are not well developed, have made the agency a target for critics within and outside the federal government. We were told by OMB examiners and HEW analysts that NIMH is spread too thin; they refer to it as the "Band-Aid institute," pursuing too much research that is relevant to current social problems in preference to research that relates to what they consider the institute's original purpose: to find causes and cures for major mental disorders. Other executive and congressional staffs argue that NIMH supports a great deal of research that is at best only indirectly related to NIMH's mission or society's needs.

These general criticisms are reflected in a deeper internal debate and schism between biomedical researchers and social scientists. The lack of any universally accepted set of standards for quality research paradigms or proven methodologies in attempting to diagnose and cure mental illness has resulted in perennial questions about research strategy: Where does the highest probability of success lie? In researching brain neurotransmitters or patterns of behavior? The fact is, no one can say with any certainty what are the most potentially productive areas to explore. We were told over and over again that NIMH research seldom results in "cures"; rather, it leads to improved "coping mechanisms." Clear successes in diagnosis and treatment are hard to find.

This uncertainty about appropriate research and the usefulness of results, plus a growing antipathy toward government-supported activities that overtly seek to modify individual behavior or restrict freedom and foster dependence, has resulted in a series of administrative reorganizations that have moved NIMH down the bureaucratic hierarchy. In a department as sprawling as HEW, access to the secretary is essential in order to marshall support for new programs and keep budgets and personnel growing for those already under way. At one point, in the 1960s, NIMH was everyone's darling: it was personally supported by President Kennedy, it was the bureaucratic equal of NIH, its research budget was growing, it was just launching its ambitious Community Mental Health Centers Program[9] amid a fanfare of promises and widespread federal commitment, and it reported directly to the secretary of HEW.

Today NIMH is submerged three layers below the secretary. It is now located in the Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA).[10] Plans for yet another administrative reorganization, which would have shifted responsibilities for mental health research back to

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[9] The Community Mental Health movement stressed a shift in mental health services from state hospitals to community-based centers. This shift was given impetus by the development in the 1950s of tranquilizers, which allowed thousands of formerly institutionalized mental patients to leave state hospitals and return to life in their communities.

[10] ADAMHA was established in 1973 and is composed of three institutes, NIMH, the National Institute on Drug Abuse, and the National Institute on Alcohol Abuse and Alcoholism. NIMH director Bertram Brown reports to the ADAMHA administrator, who reports to the assistant secretary for health, who reports to the secretary.

NIH and relocated responsibilities for service and training in another already-existing HEW agency, seem to have been abandoned. NIMH was often described by staff members interviewed as "schizophrenic"; in 1973 *Science* magazine characterized NIMH similarly (Holden 1973): "Nervousness reigns at NIMH. No one knows what things will look like when the smoke clears."

The NIMH budget reflects a general reduction in federal support. In spring 1972, amidst talk of reorganization and a decreasing research budget, NIMH established an Intra-Institute Research Task Force to conduct a comprehensive review and analysis of the NIMH's research activities and to make recommendations for future directions. One of the task force's major conclusions was that the director had not given institute research activities the attention, interest, and advocacy that the service and training programs had enjoyed. The task force recommended that the director establish an interdivisional research council composed of research managers and research scientists in NIMH to meet frequently to discuss research issues, weigh priorities, and advise the director on the institute research program. It was one of the first research task force recommendations to be acted on. Three advisory groups were initially established: the Research Advisory Group, the Child and Youth Advisory Group, and the Services and Training Advisory Group. The Research Advisory Group (RAG) was set up in late summer 1974. RAG is an external symbol of NIMH's investment and interest in research and an internal attempt to find remedies to its current lack of popularity.

It is important to understand the general philosophy that guides the institute planning procedures. The Forward Plan, a five-year strategic plan for NIMH, is produced through negotiation; there appears to be significant give and take among staff and operating divisions. Although systematic in its approach to planning, the Office of Program Development and Analysis, the institute's planning office, does not attempt to force uniformity or a "neatness quality" on the divisions. It operates with a basic acceptance of individual division differences and regards this diversity as one of the most important strengths of the institute.

In years past, NIMH forward planning documents bore little relation to one another; themes developed in one year's plan were not carried over into the following year's document. The document had little credibility as a statement of future priorities or as a management tool.

However, the Forward Plan issued in late May 1975 (for fiscal 1977-1981) is different in two major respects. First, program plans and initiatives are built around a set of themes and overarching concerns rather than a mere stapling together of division plans. Second, for the first time in five years, the institute moved its budget through HEW without a cut. HEW concurred with NIMH's request of $107 million for research; however, OMB reduced the request to $83 million.

NIMH program initiatives for fiscal 1977 are discussed around three themes: knowledge development, including extramural and intramural research as well as research training; improving the mental health care system, including service programs, service training programs, and mental health services research; and the prevention of mental health disorders. A separate section includes a discussion of institute-wide activities in three areas of cross-cutting concern: aging, child mental health, and minorities.

In preparation for meetings with divisions, the institute's planners develop a guidance that lays out a set of assumptions for the divisions to build into their plans. Divisions outline an initial draft and arrange to meet with the planning staff. The division directors decide who will participate in these meetings; branch chiefs are generally included, with other participants varying from division to division.

Based on estimates provided by branch chiefs, divisions include a dollar-allocation request in their draft Forward Plan. The previous year's budget provides the basic guideline for resource allocation; levels of funding requests tend to remain fairly constant from year to year. The resource allocation decision-making process proceeds very definitely from the bottom up. The institute director makes the final decisions, which are basically a stamp of approval on what was hammered out at the branch and division level with the help of the planning staff.

The Forward Plan is influenced from other avenues of the institute in addition to the annual planning process and the director's reliance on broad themes. Research planning conferences, subcommittees of the National Mental Health Advisory Council, task forces, expiring legislation, and the Research Advisory Group all influence institute planning. The planning process is basically an in-house activity with outside participation coming through the other avenues outlined above. The Forward Plan is distributed to outside constituency groups once it gets out of the draft stage.

NIMH research project solicitation and review procedure is patterned after the NIH model. Most proposals are investigator initiated, although NIMH occasionally issues broad program solicitations for specific priority areas, for example, child mental health. The NIH Division of Research Grants receives all NIMH grant applications. The ADAMHA grants referral officer routes the applications to one of the three ADAMHA institutes; once at NIMH, they are assigned to a division and an initial review group or study section. At this point, NIMH strays from the NIH model. Although the primary responsibility of the initial review group is to review proposals for scientific merit, the members work closely with division staff, setting priorities, identifying research trends and gaps, and providing a direct communication link to the outside research community. All applications approved by the initial review group are routed to the institute's National Mental Health Advisory Council for a more policy-related final review. The council normally approves more proposals than can be funded. Council-approved proposals are routinely signed by the institute director and returned to the divisions and branches. The approval of more proposals than can be funded provides considerable discretion to division and branch chiefs in making final awards.

Project award decisions are made at the branch level more often than at the division level. Priority scores from the initial review group serve as guidelines for project award, but final determination is most often made by branch staff. If a project is funded out of order (moved up or down the funding ladder), a letter is sent to the institute director explaining the reasons for the change in rank. The decision-making process at NIMH is open and collaborative, cutting across a variety of players, with an emphasis on flexible, nonhierarchical decision making.

The Mental Health Services Development Branch in the Division of Mental Health Services Programs has been the focal point for the support of mental health services research since 1970. This branch has developed a distinctive method for managing R&D. It has evolved from a more traditional, passive grants management role to a more active role, seeking out areas of need and supporting research that tackles problems in these areas. It takes the traditional NIH research approach—to support quality investigators who follow their own research tastes and apply their results to problem areas—and reverses it completely: to diagnose a problem area, identify specific problems, and support quality investigators who are interested in problem-solving research efforts. The branch usually supports its social R&D through grants, but detailed applied problem areas that form the basis for proposal solicitation are also developed.

The Center for Studies of Crime and Delinquency uses a similar method for managing its research and training efforts. Particular social policy objectives and public needs are specified in order to provide starting points for the center's program. Coordinated use is then made of research grants, training grants, and contract funds as available in order to achieve stated goals within the designated problem areas of priority concern.

DISSEMINATION AND USER INVOLVEMENT

NIMH communicates with a number of lobbying groups, community and national mental health organizations, and various constituent groups to keep informed of their current concerns. A major source of outside information and advice comes from the scientific and social science research communities: members of the initial review groups (study sections) and the National Mental Health Advisory Council, grantees, and a variety of academic scientists involved in NIMH decision-making processes.

In 1975 the NIMH research task force report on research information and utilization stated (U.S. Department of Health, Education, and Welfare 1975, p. 396) that NIMH lacked an "Effective policy on which to base a purposeful, coordinated, and planned effort to make research fundings known, and, whenever appropriate to encourage their use." The lack of a central dissemination policy probably stems from NIMH's laissez-faire attitude toward dissemination, relying on publication of research findings in scholarly journals to inform the scientific community of research findings. Many NIMH scientists and program staff members view dissemination activities, except for the reporting of findings in scientific journals, as neither an important nor a proper part of their activities. However, attitudes toward dissemination are beginning to change, and each of the three divisions supporting social R&D is moving toward a more-active role in dissemination.

The Division of Extramural Research Programs recently received approval of a nine-page *Final Report Guidelines* that will require each grantee to submit a final report in a prescribed format with specific types of information. The *Guidelines* instructs grantees to describe their specific project aims, methodology, conclusions or results, and other "serendipitous findings"; to comment on any difficulties they encountered; and to suggest future directions in the research area. Although tested only on a small sample of grantees, the form has been exceptionally well received; in fact, the NIMH director has indicated interest in making the *Guidelines* an institute-wide requirement.

Within the Center for the Study of Crime and Delinquency, special importance is attached to the development of strategies for information dissemination and use. Dissemination activities are based on practical, user-oriented criteria. The ultimate goal is the translation of research results into tangible social benefits. The center is the prototype for institute dissemination efforts and has developed an impressive monograph series designed to make important research findings more accessible to potential users: policy makers; federal, state, and local bureaucrats; private or not-for-profit practitioners; and other interested persons. Two types of monographs have been published: "Crime and Delinquency Topics," which are brief literature reviews and evaluative discussions on special problems of broad public interest, and "Crime and Delinquency

Issues," which are in-depth discussions of the issues of concern to a more specialized audience.

Dissemination research supported by the Medical Health Services Development Branch has indicated that investigators who initially map a plan for dissemination of project results are more likely to have those results used. As a result, each grantee is expected to design and implement a dissemination plan for project findings. When the push for closer monitoring began a number of years ago, only 53 percent of the projects had final reports available within six months of termination. The unreported projects totaled a research outlay of more than $6 million. Today there is nearly 100-percent receipt of final reports on termination of projects within the branch. In addition to individual project dissemination, two grantees of the branch produce *Innovations* and *Evaluation*, two magazines used to communicate research findings and other important policy information to the community of researchers, providers, and managers who are interested in the causes and treatment of mental health problems and the delivery of mental health services.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH

THE LEVEL AND CONTENT OF SOCIAL R&D

The National Center for Health Services Research (NCHSR) has priority areas for research, which include:

- *Health Care and the Disadvantaged:* Barriers to access; institutional and programmatic influences on delivery and use of health services; and cost-benefit and cost-effectiveness analysis of federal, state and local programs.
- *Emergency Medical Services:* Measures of effectiveness; system descriptions and relationships; policy issues, techniques and equipment.
- *Health Manpower:* Potential impact of collective bargaining, health-industry career patterns, development of techniques for estimating the adequacy of the manpower supply.
- *Quality of Care:* Development and improvement of techniques for assessing quality of health services, formulation of measures of health status, evaluation of technological innovations in the delivery system that might improve care, malpractice insurance problems.
- *Inflation and Productivity:* Cause and effects of the rising intensity of hospital services; unemployment and its impact on the consumption of health services.

- *Health Insurance:* Evaluate existing data that might inform decision makers, identify natural experiments (for example, those in Canada) suitable for analysis, analyze collected data focusing on the potential cost-effectiveness of providing disease-specific catastrophic insurance.
- *Planning and Regulation:* Develop quantitative techniques for analyzing resource allocation issues; explore problems in identifying, testing, and evaluating techniques that have some potential for increasing the effectiveness of the planning process and consumer participation in planning.
- *Long-Term Care:* Dimensions and demand for long-term care, supply and access effects of existing insurance and regulatory policies, cost and distributive implications of alternative assistance strategies.

Table 3-11 depicts the obligations (both grants and contracts) of NCHSR by the eight priority areas for fiscal 1976.

NCHSR has had a short and troubled history. The center was established by directive in May 1968, " to serve as the focal point of federal efforts to improve the nation's health services through research and development [evaluation and demonstration] activities."[11] President Johnson had directed the establishment of the NCHSR in a special congressional message on health and education delivered in February 1967. In May 1967 a joint task force staffed by HEW and American Rehabilitation Foundation personnel was charged with proposing planning procedures and operational recommendations for the new center.

The federal roots of the center are not deep. Government research on hospital facilities and nursing was not begun until 1955 in the Bureau of State Services. Efforts in health services R&D before 1968 had been split between the traditional Bureau of State Services and an NIH-maintained Health Services Research Study Section, which approved the first federal grant application services R&D in 1963.

Passage of the Medicare and Medicaid legislation laid the groundwork for NCHSR. Although these programs brought the federal government into health services in a major way, passage of the legislation did not resolve the crucial issues in health care that concerned physicians, politicians, and others: questions about access, distribution, equity, federal control, personal autonomy, and economic efficiency.

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[11] Not until passage of Public Law 93-353 in 1975 did NCHSR gain a statutory base. Public Law 90-174, authorizing NCHSR appropriations for fiscal 1968–1970, cited in an undated NCHSR internal memorandum entitled "National Center for Health Services Research: Legislative History."

TABLE 3-11 Estimated Obligations for Social R&D of the National Center for Health Services Research by Priority Area (fiscal 1976, $millions)

Priority Area	Estimated Obligations
Health care and the disadvantaged	2.1
Emergency medical services[a]	-
Health manpower	3.0
Quality of care	5.0
Inflation and productivity	2.5
Health insurance	3.2
Planning and regulation	1.7
Long-term care	1.5
TOTAL	19.0

[a] In fiscal 1976 funded at $3 million by the Health Services Administration and administered by NCHSR.

SOURCE: U.S. Office of Management and Budget (1976) Budget of the United States Government. U.S. Department of Health, Education, and Welfare, National Center for Health Services Research. Washington, D.C.: U.S. Office of Management and Budget.

Thus the need for a national center for health services research sprang from the entry of the federal government into the delivery of health services without resolution of many of the key issues inherent in the delivery problem. In time Congress, the executive branch, and outsiders pressed for a research organization whose mission was to attempt to answer the fundamental questions about health services delivery.

The troubled history of NCHSR can easily be discerned from Table 3-12. The center has suffered from a lack of funding stability. (Stability for a research organization implies a growing source of funds that attracts new researchers, keeps the productive ones supported, and creates continuity within research areas.) Moreover, from time to time, the center's funds have been raided by officials in HEW's Office of the Secretary in need of discretionary project or study funds. A third handicap of the center is its mission, which cannot be so neatly packaged as those of NIH institutes—to conquer cancer or heart disease. In this regard, the problems of concern to NCHSR, similar to those at NIMH, are much more difficult to articulate to the public and to Congress. Often the result has been misunderstanding, frustration, and disillusionment with the center's research results.

TABLE 3-12 Appropriations for Social R&D of National Center for Health Service Research (fiscal 1970–1977)

Fiscal Year	Appropriation ($millions)	Average Consumer Price Index, All Items (1970 = 100)	Real-Dollar Appropriation ($millions)	Change in Nominal Dollar Appropriation (percentage)	Change in Real-Dollar Appropriation (percentage)
1970	40.7	100.0	40.7	—	—
1971	51.6	105.1	49.1	+26.8	+20.6
1972	56.2	109.0	51.6	+8.4	+5.1
1973	58.0[a]	113.3	51.2	+3.2	−0.8
1974	38.0[b]	123.6	30.7	−34.5	−60.0
1975	35.9	137.4	26.1	−5.5	−15.0
1976	26.0	147.7[c]	17.6	−27.6	−33.6
1977	24.0[d]	158.5[e]	15.1	−7.7	−14.2

[a] No appropriation. The NCHSR operated under a continuing resolution.

[b] Appropriation of $41.1 million was subject to 5-percent rescission.

[c] Estimate based on 7.5 percent seasonally adjusted, annualized rate of inflation from September to November, 1975.

[d] As contained in the President's budget proposal.

[e] Estimated by assuming 7.5-percent average rate of inflation.

SOURCE: National Center for Health Services Research, *Program Plan for 1978-81*, internal document.

THE PLANNING AND MANAGEMENT OF SOCIAL R&D

Initial management of health services research activities reflected the NIH model: the dominance of investigator-initiated research grants with determination of award by peer review on scientific merit. The federal government provided the money; the individual investigators defined the topics to be researched. Although investigator and study section control provided some top-notch research and promoted long-range development of knowledge, it did not produce immediate, policy-relevant results. Yet such results were needed for the center to establish its funding priority with HEW, OMB, and Congress.

The first director of NCHSR relied on the NIH model for managing research largely for two reasons. First, the NIH model existed in the health care area, and it was readily adaptable to NCHSR, particularly since clear substantive research areas had not been established. In such a situation, reliance on people outside the federal government to judge proposals on the basis of methodological questions seemed the most reasonable. Second, the newly created center did not inherit a strong group of researchers, nor was an intramural effort part of the center at the beginning. Therefore, the incentives to turn to outside experts and investigator-initiated proposals were strong.

Center management recognized the potential trouble over a perceived lack of policy relevance and tried to head off the unrest by holding a series of meetings with a broad range of health interests to outline problems and determine research needs. Five research priority areas were established as a result of these meetings, but continued reliance on investigator-initiated research projects prompted some observers to label the priority areas as largely a facade; the result was increasing criticism and frustration with the activities of the center.

In 1972, against a backdrop of increasing concern with the center's failure to produce relevant, timely research, the President's Science Advisory Committee (PSAC) Panel on Health Services R&D issued its report (Executive Office of the President 1972, pp. 2-3):

> The most important conceptual problem is the need to classify and restructure the different tasks involved in health services R&D. There are four major components or functions in this field:
>
> —Policy analysis.
> —Collection and diffusion of information and statistics.
> —Development, testing and evaluation of new health services systems and processes.
> —Research and the related activities of training new investigators for the field.
>
> Each has different potentials and limitations and each has different responsibilities, organizational requirements, funding needs and timing requirements. Failure to take into account these differences weakens the total thrust of health services R&D and also helps lead to unrealistic expectations.

The panel outlined six recommendations, three of critical importance to the center: NCHSR should be abolished and its responsibilities in research, development, information collection, and policy analysis should be reassigned to new or existing organizations. A National Health Care Research Institute should be created to provide "stability, visibility, and independence for research in the Health Services and Mental Health Administration."[12] A Policy Analysis Group should be created within the Office of the Secretary to "support the policy-making process in the

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[12] The Health Services and Mental Health Administration was the organizational arrangement in the HEW health area that antedated the present structure with ADAMHA, the Health Resources Administration, and the Health Services Administration.

Federal Government and to broaden national insights into the basic issues and options in the health care system." The potential impact of the PSAC report on the organization of health services R&D and, therefore, on the nature of problems to be investigated, was enormous; its actual impact was minimal.

In 1973 a new center director was named who was largely a caretaker; his replacement was appointed in May 1974. The new director is a fiery, vigorous individual who defined his first task as imparting a new direction to the center; he spoke of "putting the center on the map." He is an advocate of managing the research effort, of picking policy areas and targeting research to those areas. He believes that he has the toughest research management job in the health field. He is attempting to get answers to the difficult, politically explosive economic and social questions that underlie the appropriate federal role in health care, while the rivals he perceives, NIH and the Social Security Administration, rely on or avoid controversy by collecting and publishing statistics.

During summer 1974, NCHSR sponsored two conferences to design and build an overall center research program. These conferences, each lasting several days, were made up of key center staff, selected researchers from outside government, and a few HEW research managers—about 15 people per conference. The idea was first to get a general sense of what the research community and the NCHSR program managers believed were major issues, organizing proposed activities around various constituency concerns, and then to tailor those concerns to policy issues. These broader policy issues eventually became the center's research priorities.

"The Program in Health Services Research," a booklet published in October 1975 to provide an overview of the center research program, outlines the guiding criteria for establishing center research priority areas (p. 1):

> In general, problems which affect the allocation of substantial resources, which affect the health of a large segment of the population, or which command growing legislative interest would seem to be obvious candidates. Yet, there is no widely accepted scheme for weighing and ordering, in terms of relative importance, the myriad of health care problems that, from time to time, attract attention of the public as well as those in the field itself. To deal with this situation, the National Center has concluded that it must regularly call upon policy makers, consumers, health care providers, and program administrators to identify current and emerging health care issues which they believe to be most pressing.

In terms of broad center research priorities, the issues have been classified and defined. However, the objectives to "regularly call upon" interested members of the outside community will be difficult to attain. It is nearly impossible for the center staff to involve those outside the center regularly and systematically. The center conducts an average of two formal meetings each month with a constantly changing variety of outside experts and develops some of its strategies in consultation with those outside the center. Nevertheless, the arrangements with any particular individual or organization are largely *ad hoc* owing to the size of the health research community outside NCHSR.

Decision making at NCHSR is highly centralized; it is a fairly closed system revolving around the director and three or four hand-picked assistants and division heads. Essentially, the director makes the decisions about which researchers receive funding. He may solicit outside opinions, ask others to listen to his ideas, or take advice from some of those staffers he has personally recruited or accepted; but for the most part he selects the topics to be researched and the investigators.

The first step in annual center research planning involves the director and the director of the Division of Health Services Research Strategy; a few others may contribute, but those two have center stage. They identify several key research issues and solicit comment from consultants, users in the field, and center staff with particular operational expertise. Careful distinction is drawn between the doers of research and the users of research results. Research priorities are identified by users—program operators, members of Congress, health service providers, and policy makers.

The refined issues then become center research priorities and are sent to the appropriate divisions not for revision but for comment and elaboration. Divisions may offer suggestions or additional information, but the priorities are largely imposed from the director's office and the Division of Research Strategy; division heads have little discretion to change priorities.

Grant applicants are instructed to submit applications to NIH's Division of Research Grants when solicitation deadlines correspond with its deadlines and to submit applications directly to the center at other times. In those cases when applications are sent directly to the center, copies are forwarded to the Division of Research Grants for central filing and logging. NCHSR would like to take over the process from the Division of Research Grants in order to speed up the grant submission-review-funding process; current turnaround time through the Division of Research Grants is five to six months. Center officials believe they could have an 8–12-week turnaround if they used a center-run process.

NCHSR has three study sections: Health Services Research, which reviews primarily research grants; Health Services Developmental Grants, which reviews primarily demonstration grants; and Health Care Technology, which reviews both research and demonstration grants. Applications are assigned to study sections by the center grants referral officer according to the expertise of the study section members. Study sections are composed of experts outside government from differing disciplines and meet three times each year. If more review is required, which is often the case with special solicitations, experts are invited to participate in study section meetings and applications are mailed to outside consultants for collateral review.

In 1975 the center's National Advisory Council was abolished. Advisory councils had been written into legislation for the NIH institutes but not for NCHSR. Because of the increasing tendency of the council to second-guess the study sections about the substantive and methodological merit of proposals instead of sticking to its charge of reviewing for policy relevance, the advisory council was terminated abruptly. The abruptness with which the council was abolished led many inside and outside observers of NCHSR to believe that advice, the prime responsibility of the council, was no longer wanted or needed. A reservoir of hard feelings among some NCHSR staff members and the research community remains.

Study section rankings are sent to the divisions, where projects are ranked according to division priorities. Study section rankings, project officer comments, division priorities, and the advice of several close associates combine to influence the director in the final selection process. As with setting research priorities, almost all resource allocation decisions, including individual project awards, are made by the director. He overturns study section priority funding lists and division priorities about 50 percent of the time in making final selections. Since the center's funding level has been drastically cut, there is little money available to start new projects. In order to free some money for new projects, the center determined to cut continuation projects by 15 percent in fiscal 1976 and beyond.

The NCHSR had not had an intramural research effort until recently. In fact, many observers argue that the lack of such an effort has critically affected both the quality and the continuity of center research. The fact that the task project monitors are not themselves researchers leads inevitably to oversight that becomes largely administrative, with little attention to substance or methodology. In July 1974, Congress mandated that the center use at least 25 percent of its funds for intramural research efforts. Although we questioned officials in NCHSR, HEW's Office of the Secretary, and congressional staffs, a determination of responsibility for the mandated intramural program and the reasons for its establishment was not forthcoming.

Early in fiscal 1976, the center extended an invitation to all Public

Health Service agencies to submit proposals for health services research projects they would like to conduct under the auspices of NCHSR's intramural effort. The Study Project did not judge the response, the quality of research that is likely to be done, or the intramural effort's effect on the total operations of the center.

DISSEMINATION AND USER INVOLVEMENT

All completed center research projects are filed with the National Technical Information System. Reports from various center-sponsored conferences, for example, the 1974 Conference on Catastrophic Illness, are published with a NCHSR cover and widely disseminated to researchers and providers in the health services community. In an attempt to condense voluminous final reports, the center recently initiated a policy requiring all grantees to submit a 10-page executive summary of their research projects. Yet the center staff with whom we talked viewed this as only a stopgap measure and cited dissemination as an area of weakness that demands more attention and resources.

DIVISION OF HEALTH INSURANCE STUDIES, OFFICE OF RESEARCH AND STATISTICS, SOCIAL SECURITY ADMINISTRATION

THE LEVEL AND CONTENT OF SOCIAL R&D

The Division of Health Insurance Studies is buried in the federal government's Social Security Administration (SSA), whose fiscal 1977 budget is likely to be more than $100 billion. The division is one of six in SSA's Office of Research and Statistics (ORS), which many argue is perhaps the social R&D organization in the government with the best reputation for the quality of its research.

Initial legislation establishing SSA was passed in 1935. President Roosevelt had wanted a federal disability health insurance package, but such a provision was not included in the original act. As a fallback position, a group of "liberal" senators put a sentence in the act that mandated that the new administration study and make recommendations for expanding, improving, and ensuring the economic security of the American people. This was the foot in the door that SSA needed to launch its research efforts.

SSA commissioners were never reticent about taking stances on the need for new program areas—pushing for coverage extensions, new benefit formulas, disability insurance, and Medicare. From the beginning SSA's research supported the development of new program areas. ORS stressed the importance of research-based program development and the need for evaluation and reliable program statistics. The relationship between program development and research was complementary, and SSA's programs were successful. Good research was encouraged and recognized by top-level management.

THE PLANNING AND MANAGEMENT OF SOCIAL R&D

In a sense the circumstances surrounding the social R&D effect at SSA were unique. The R&D effort was not particularly visible to budget examiners and congressional interrogators because it existed in an immense agency funded through its own tax and trust fund arrangement and in which the research budget was extremely small compared with SSA's total expenditures. SSA's programs enjoyed unwavering political support in both parties, in the executive branch and Congress, and among the American people. However, more than unique circumstances have created ORS's reputation. Continuity of the research program, a strictly intramural effort, a conscious choice to collect statistics and data for others to analyze, and (somewhat like the Department of Defense) being the major consumer of its research output have been key management decisions that are also at the heart of ORS's success.

With a strictly intramural effort, research activity is directly linked to program development and, therefore, researchers are more closely linked with program staff. These closer ties foster a qualitatively different kind of research planning, since there is a shared awareness of the major issues and there is continuity between the researchers and program operators. Conflicts between researchers and operators do arise, but they can be negotiated within the organization at the level of assistant commissioner or commissioner. Studies relate to one another; there is direction—an anticipated beginning and conclusion; the results of research build a body of related knowledge; and they are used.

ORS is largely known for its data collection. Statistics generated in various divisions in ORS are used by both sides in policy battles. This was true, for instance, in the Medicare battle, in which advocates and dissenters both relied on SSA statistics. ORS has viewed its responsibility as presenting solid data, not as getting into policy fights on one side or the other. Such a posture was instrumental in establishing and maintaining ORS's reputation and minimizing the likelihood of besmirching it in the inevitable value conflicts inherent in choosing sides in a policy fight.

As one might imagine given the tradition and history of ORS, the management of the research effort is planned, methodical, and detailed. Every year all divisions in ORS go through a planning routine that is carefully documented with internal memoranda and external publications.

The assistant commissioner for research and statistics sends out research planning guidance to all the divisions. Divisions then prepare tentative work plans that include total five-year costs for each project broken down by research personnel costs and necessary support items. The originators of the division plans are the individual researchers; in fact, many of the plans are so detailed that individual names of researchers are included. The work plans include milestones with specific deadlines plus any operational objectives that need to be completed during the project, for example, letters to people who will receive surveys, preliminary reports, and summaries.

The projects that researchers propose and division heads incorporate in their work plans flow from program problems. In many cases bureau personnel in operating parts of SSA have requested projects, information, data, or general help that becomes a proposal in the work plan. However, division heads in ORS often propose projects that program operators do not consider important. This causes friction between the researchers and operators from time to time, but tradition is on the side of the researchers in such a dispute; SSA grew accepting the notion that these two groups see the world from different perspectives.

Once the division work plans are completed, the assistant commissioner and deputy spend one entire day with the staff of each of the divisions reviewing the work plans, eliminating projects that have not turned out well, and modifying other projects as necessary. The modified work plans then form the basis for ORS's budget submission through SSA to HEW, OMB, and ultimately Congress.

Since 1976 the Division of Health Insurance Studies has broken out of the traditional ORS intramural mold in two important ways. First, the division, which is now the largest, with about 150 of ORS's 500 personnel, is managing a major $10 million contract research effort—an unheard-of level of contracting given ORS's philosophy. Second, the division has actively sought research problems of interest to policy makers outside SSA. The division now has no need to advertise for business; it regularly receives requests from executive and congressional policy makers for statistics, data, and information generated by its intramural and contract efforts.

However, these changes should not imply that some of the key ORS traditions have not been retained. The division is following ORS's time-honored strategic success formula: providing data under the assumption that simple statistics have more force than great pronouncements. A case in point is a recent stir that came about following the publication of data comparing average length of stay for selected diagnostic groups by Professional Standard Review Organizations (PSROS); the data showed remarkable differences among PSROS. A second tradition that is maintained is the detailed management of the research effort, every bit as carefully managed as previous efforts. Requests for proposals are tightly written and carefully monitored; specific products are required. A third is that all contract monitors are researchers. The division is working to train researchers to manage contracts and utilize contracts to extend and expand their own research capabilities; the new director refuses to hire nonresearchers to be contract monitors managing the extramural efforts.

The change in operation within the division has its roots in an original agreement in 1967 between ORS and SSA's Bureau of Health Insurance (BHI). BHI was to conduct a series of health insurance experiments and ORS was to evaluate them. The experiments were largely failures, and ORS never completed the evaluation, blaming the failures on poor experiment design and the advocacy rather than research orientation of the BHI personnel. A much more important reason was the climate in the hospital industry, which at the time was not focused on cost control or finding new ways of doing things. The 1972 amendments to the Social Security Act and sections of the 1974 Health Planning and Resources Development Act mandated a new series of experiments and demonstration projects dealing with alternative reimbursement mechanisms under federal health programs. ORS was given responsibility for conducting these experiments and demonstrations.

The contract effort has expanded from about $1 million to more than $10 million, with 40 percent of the funds going to universities and not-for-profit research institutes and 60 percent to private for-profit research organizations. These efforts are directed to all types of health financing problems.

The Division of Health Studies research strategy makes the traditionalists in ORS uneasy, for it departs significantly from the proven methods with a large share of ORS's resources. The present director is more policy oriented than previous ORS division heads, arguing that important research in health financing must be done by evaluating the results of ongoing programs. Given personnel ceilings, such arguments automatically lead to contracting. Contracting, particularly in policy-relevant research areas, is likely to lead to advocacy as one defines the problems, selects the researchers, and then may feel compelled to defend the efforts of the contractors. This too makes the traditionalists in ORS uneasy. Data collection and statistical analysis, not advocacy, have been ORS's hallmark.

DISSEMINATION AND USER INVOLVEMENT

The biggest problem with dissemination in ORS is timeliness. The validation of data, computer logs, and other complications slow down the production of statistical reports that are perishable in nature. However, a look at ORS's publication list or seminar presentations and professional meetings attended by researchers indicates that dissemination is an important goal that receives regular, systematic attention.

The audience for this dissemination effort is also carefully specified:

- The Commissioner's Office and the Office of the Secretary in HEW.
- The Congressional committees and subcommittees and individual members of Congress.
- Other departments and agencies of the federal government.
- Specialized mailing lists that have been developed through the years and are pruned regularly on the basis of requests received.

OFFICE OF THE ASSISTANT SECRETARY FOR PLANNING AND EVALUATION

THE LEVEL AND CONTENT OF SOCIAL R&D

The Office of the Assistant Secretary for Planning and Evaluation (ASPE) was established in December 1965. It was a direct result of President Johnson's decision in August 1965 to introduce the planning, programming, budgeting (PPB) system throughout the federal government. The new assistant secretary for program coordination (later called the assistant secretary for planning and evaluation) was charged with building a PPB system from scratch—that is, a five-year program and financial plan that was to serve as the basis for budget decisions and supportive program analyses.

Today, with the PPB system (including the formal program and financial plan) shelved, the assistant secretary for planning and evaluation serves as the principal adviser to the secretary of HEW on departmental policy development, program evaluation, telecommunications policy, and department-wide planning, research, and evaluation management systems. It is a portion of this last responsibility plus management of the health insurance experiments that are of particular interest regarding the management of social R&D in the health area.

Evaluation dollars come from a set-aside arrangement in health programs that allows up to 1 percent of operational funds to be spent on evaluation. Of those dollars, 75 percent belongs to the agency concerned and 25 percent to ASPE for its own evaluation studies. In fiscal 1975, the 1-percent set-aside amounted to $45 million, yet ASPE spent only about $2.5 million and the health agencies about $12.5 million, a total of $15 million.

The health insurance experiments are lodged in ASPE in the Office for Income Security Policy largely by historical accident. With the dismantling of the Office of Economic Opportunity (OEO) in July 1973, the poverty-related research and demonstration programs were transferred by delegations of authority to the Department of Housing and Urban Development, the Department of Labor, and HEW.

The experiments were incorporated in the Office for Income Security Policy in ASPE largely because that office had been actively involved in managing analogous income maintenance experiments, and no other office in ASPE particularly desired the increased responsibility (and headaches) or believed so strongly in the efficacy of social experimentation. We were told that OMB wanted the experiments somewhere in the Office of the Secretary to ensure management oversight that stressed policy relevance and, therefore, did not want agencies with program responsibilities (SSA, the Social and Rehabilitation Service, or the Public Health Service) to manage them.

The health insurance experiments grew from a set of unique circumstances in the late 1960s and early 1970s. Guy Orcutt and Alice Orcutt (1968) suggested that the successes of experimentation in the biological and physical sciences would lead the public to accept experimentation in the social sciences. Orcutt and Orcutt were not alone in their beliefs; social scientists at OEO pushed for social experimentation and the creation of basic data that would provide answers to the questions and uncertainties that plagued policy development in the social welfare area. The income maintenance experiments came first, followed by the health experiments; the Department of Housing and Urban Development later initiated the housing allowance experiments.

The health insurance experiments have a number of goals (Newhouse 1976, pp. 1-2):

- To estimate how alternative cost-sharing arrangements affect the demand for health care services. If several groups of similar people are covered for the same health care services, but if the cost of services is varied from group to group (different amounts of convenience, deductibles, or maximum out-of-pocket payments) how will the utilization of (demand for) health services vary across groups? . . . Health services in this instance are defined broadly to include services frequently not covered by existing insurance, such as dental, vision, hearing, mental health, and pharmaceutical services.

- To assess the impact of varying the cost of health services on the health status of individuals. If people differ in the degree to which they make use of health services as a result of cost variation, what effect (if any) does this have on their level of health?
- To determine whether (and by how much) cost-sharing arrangements affect low-income families more than higher-income families.
- To ascertain how the ambulatory care system can accommodate to varying levels of demand or stress. We will endeavor to learn how physicians and dentists adjust as more patients attempt to see them. . . .
- To gain familiarity with the difficulties of administering health insurance plans that place a ceiling on out-of-pocket payments by the family, the ceiling being defined as a fraction of annual family income. . . .
- To learn how the quality of medical care received differs (if at all) among individuals who have various insurance plans. It should also be possible to evaluate different methods of quality assessment, in comparison with each other and with known outcomes.
- To compare utilization, quality of care, health status outcomes, and consumer satisfaction in an existing prepaid group practice with the fee-for-service system.

THE PLANNING AND MANAGEMENT OF SOCIAL R&D

Health Insurance Experiments

The structure of the experiments is set, and management decisions at this point are incremental changes to the initial research design. Recent important decisions have been made regarding the size of control groups, the length and number of interviews necessary for answers to questions about health status and satisfaction with care, and the use of physical examinations before enrollment in an experimental program and at the conclusion of the experiment. All these decisions have been made by the director of the experiments in conjunction with the grantee, the Rand Corporation.

The initial year of the experiments—fiscal 1973—was spent largely on design. The first big operational grant came in fiscal 1974. To date, $12 million has been spent and $20 million obligated. Estimates indicate that the total cost will come to about $40 million. The Rand Corporation was the recipient of a grant to run the experiments as a result of a competitive selection. At the time that the award was made, OEO rules suggested a grant primarily because the development of the specifications of a contract would have been an enormous, if not impossible, task and there is no contractor's fee associated with a grant, which theoretically implied a cost savings.

When the health insurance experiments initially came to HEW, an outside team of consultants was formed to review the experiments to determine whether they should be continued. The consultants favored continuation of the experiments. The dissenters argued that experimentation is not cost-effective; that the expenditures could easily go to $60 million or $70 million; that the experiments were over-funded; and that the data collection was too meticulous.

More-fundamental criticisms linger at ASPE as well. The perennial questions are: Can you ever know the true behavior of the general population by looking at a small sample under a microscope? Can the artificial experimental conditions ever approximate those of the real world? Others argue that the income maintenance experiments suffered because labor economist advocates were concerned with questions about labor-force participation, when the more relevant question was participant behavior relative to alternative program structures.

The health insurance experiments have profited from earlier mistakes, testing a number of alternative health insurance schemes. Nevertheless, given increasing costs, experimental results, and unanswered questions, the analogy between the physical and the social sciences is not nearly so persuasive an argument as it was six to eight years ago.

Health Evaluation

ASPE has struggled with evaluation planning and management for as long as it has existed. The assistant secretary is responsible for guiding, coordinating, and assessing the entire evaluation system of the department. In this capacity, ASPE staff review annual evaluation plans submitted by HEW agencies and coordinate the further review of these plans by other components of HEW. But notwithstanding those responsibilities, evaluation continues to have less attention and personnel devoted to it than the policy analysis and program development functions within the office.[13]

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[13] The reasons for this are twofold: First, analysts are more interested in policy issues because they are more exciting. Secretaries are interested in resolving policy conflicts and make decisions sometimes on the basis of analysts' efforts, often at least reviewing their efforts. OMB and the White House are interested for the same reasons, and they perform similar functions to the secretaries; Congress usually has the final say in im-

Historically, evaluation has suffered from two major problems. First, the very nature of the program structure, its organizational support, and the concomitant evaluation planning system has led to piecemeal evaluation of programs and program components that seldom relate to one another and almost never add up to a comprehensive review. Second, agency and program heads seldom get involved with designing, monitoring, or reviewing evaluation studies; instead, evaluation planners usually work in a vacuum.

There is a well-developed planning routine for evaluation. Guidance on the preparation of plans and proposals is sent to the agencies in February each year. Evaluation planners develop agency responses, normally without the help or interest of agency heads, and forward their material to the Office of the Assistant Secretary for Health. Here the material is bundled, seldom reviewed, and sent directly to ASPE's health evaluation staff.

In an attempt to overcome the two historic problems of evaluation, the ASPE review is not a methodological reporting but rather an attempt to obtain answers to the following three questions:

- Does the proposal raise questions about a program that are judged worth asking?
- Can one reasonably expect to be able to generate answers to those questions?
- Will any policy makers use the answers once they are generated?

ASPE undertakes evaluation studies after it has reviewed the health agency proposals. The health evaluation staff looks for gaps, issues, or pertinent questions (given their policy vantage point in the Office of the Secretary) that are not being addressed by the agencies. However, the evaluation staff and other health analysts do not sponsor many evaluations, because the workload of the review process is such that not much time is left for contract monitoring. Staffing is the major constraint to more evaluation studies in ASPE.

The health evaluation staff is trying to move the whole evaluation process in the health area in a new direction. The staff wants programs to develop evaluation plans, in conjunction with its office, that would consider a whole set of questions with regard to a program, then lay

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portant legislative and budgetary matters. Second, there are regular processes—the budget, expiring legislation, etc.—and irregular but demanding ground swells that force policy consideration of specific issues. There is no action-forcing event that requires using evaluation results in decision making.

out a series of phased studies that would provide a thorough evaluation of that program. The evaluation staff has encouraged the Office of the Assistant Secretary for Health to put together one such plan—it took about a year to develop—for the Professional Standard Review Organization (PSRO) program. Three coordinated studies developed in accordance with this plan will be undertaken by the Office of Planning and Evaluation in the Health Services Administration (an office in the agency responsible for PSROs but not the specific program staff itself). The hope is that such an approach will attack the problem of fragmented studies and that the multiyear, multistudy plan will be too important, in dollars and content, for agency and program heads to ignore.

Almost all evaluation studies are contracts won through competitive bidding. Very little sole-source contracting takes place. The audience for ASPE evaluation studies is the secretary, OMB, and Congress, although results are always shared with the health agencies and program officials.

DISSEMINATION AND USER INVOLVEMENT

The Assistant Secretary for Planning and Evaluation is the principal adviser to the secretary on departmental policy development. The assistant secretary not only oversees the annual planning and policy development process within HEW that culminates in a budget proposal and legislative plan, but he also advises the secretary on the day-to-day policy issues that arise because of pending legislation, White House initiatives, criticism from interest groups or other outsiders, etc. Thus ASPE has an important institutional role in policy development.

The assistant secretary has a deputy for health who is largely the key analyst and adviser on all health policy matters. The deputy who holds this position is expected to function as a broker for research results—linking the doers of research with the decision makers in the policy process. The position requires the holder to seek out health research managers looking for research results that will help answer important unknowns in policy making. In this regard, deputies have encouraged specific studies, experiments, and model-building in different health agencies as they needed information owing to a lack of knowledge or gaps in research coverage; they have worked especially closely with the Division of Health Insurance Studies in the SSA and the NCHSR.

The dissemination of results from the health insurance experiments conducted in ASPE and the perspective reimbursement experiments in SSA's Division of Health Insurance Studies is taking place regularly because of the general policy importance of the subject matter and the close linkages that ASPE has established with these research efforts.

However, dissemination of evaluation results has never been satisfactorily handled, and, although there are rules to improve the process, success is still elusive. When a study is finished, the agency that contracted for it must send ASPE and the National Technical Information Service a copy with an executive summary. The health evaluation staff also requires a cover memorandum transmitting the study and including an explanation of the implications of the study for the program. Nevertheless, evaluation results receive only cursory attention at both the program manager's level and the secretarial level, either because policy makers are not interested in study results that do not conform to their judgments about the program or because the researchers have been unable to blend policy concerns and scientific excellence into a useful, relevant product.

AN ASSESSMENT

THE LEVEL AND CONTENT OF SOCIAL R&D

The largest social R&D expenditures are in the area of health care delivery and services. The Health Resources Administration, largely through NCHSR, and the Health Services Administration support the bulk of the health care delivery and services research; most of the remainder is spread among a number of other HEW organizations.

Food and nutrition is the second-largest category of social R&D expenditures, and almost all these activities are undertaken in the Department of Agriculture. The third-largest category is substance abuse, prevention and rehabilitation, which is almost totally funded by the National Institute on Alcohol Abuse and Alcoholism and the National Institute on Drug Abuse, both in the Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA). Mental health is the fourth-largest category, and expenditures in this area are almost totally the responsibility of the National Institute of Mental Health, also in ADAMHA. The smallest category is environmental health, accounting for less than 2 percent of total health-related social R&D expenditures.

Some general observations stem from our interviews with officials in OMB, the Congressional Budget Office, and congressional staffs. The era of faith in health professionals and in the promises of R&D is largely over. Skyrocketing health costs have cultivated a more skeptical attitude among budget officials, members of Congress, and senators. The lack of spectacular successes—the example of polio vaccine is useful only for a limited number of years—alongside the huge cumulative expenditures on all types of R&D has led generally to a thrift ethic when it comes to R&D.

More importantly, expenditures in support of service programs have grown over the last 10 years; and while OMB has been trying to curtail the federal involvement in health (particularly services, facility construction, and R&D), Congress has been adding to the President's budget request. However, the add-ons have been largely for service programs at the expense of R&D. Individual projects, which make up service programs, exist in congressional districts and have stronger, more vocal constituencies; they can muster more political clout than R&D supporters. According to staff members on Capitol Hill, it is not clear whether Congress's failure to add on in the social R&D areas is because they have not seen justifiable results, are contrite because they have already added to the service side of the ledger, or a combination of both. In any case, congressional staff members report that there is much greater political support for biomedical research than for social R&D in the health area. As one staff member put it:

> In a newsletter back home to the constituents a vote to support a thirty million dollar effort to cure diabetes goes down a lot better than a vote to spend 300,000 dollars to investigate alternative co-insurance schemes for Medicare. Most constituents don't understand the latter, and to the extent they do, they know it could cost them more money.

Finally, congressional staffs argue and the expenditure records confirm that the scientific community and its supporters are more effective at lobbying than social scientists and related special-interest organizations. The scientific community is better organized and has a more salable product. The product is an important ingredient: the more concrete and defineable the target one is aiming at, the more likely it is that one will receive strong political support.

THE PLANNING AND MANAGEMENT OF SOCIAL R&D

There is considerable goal-oriented management of social R&D in the health area. SSA's Division of Health Insurance Studies, the health evaluation effort in ASPE, the NCHSR, and NIMH's Mental Services Development Branch and the Center for Studies of Crime and Delinquency are being actively managed by their directors. In the case of SSA and ASPE, contracts are being used as the mechanism to allocate funds; but the problems to be investigated, the design of the projects, and the level of resources is determined by the director and staff of the Division of Health Insurance Studies in one case and the Division of Health Evaluation in the other. In a similar manner, the director of the NCHSR, the chief of the Mental Health Services Development Branch, and the chief of the Center for Studies of Crime and Delinquency are the key decision makers, determining which proposals their organizations will fund. All rely on the grant mechanism to allocate dollars. Nevertheless, by setting up research priority areas, they are able to channel the investigator-initiated proposals into the subject areas that, in their opinion, deserve research emphasis. (In the case of the Mental Health Services Development Branch and the Center for Studies of Crime and Delinquency, the peer review process is somewhat more important than at NCHSR.)

NIH and the remainder of NIMH research are less goal oriented. There the investigator-initiated grant process leaves the problem definition and research methodology in the hands of the investigator. The budget process—how much money is available—largely determines who gets funded by establishing funding cutoffs. Study sections, advisory councils, and research managers and staffs collectively set the funding priorities, with the study sections the most influential.

It is interesting to note that officials at OMB, the Congressional Budget Office, and congressional staffs all agree that they cannot distinguish a difference in the quality of research based on whether grants or contracts had been the method of support. However, all do agree that the instrument used makes a large political difference. Not-for-profit organizations and colleges and universities receive relatively more funds with grants, whereas private for-profit firms fare relatively better with contracts.

Two final observations: first, in HEW the health area is tied to an overall department-wide planning effort. Each of the five agencies studied has a five-year plan, and for three of them (NIH, NIMH, and NCHSR) there is a coordinating office—that of the assistant secretary for health. Guidance for the planning process is prepared in the Office of the Secretary; and although the process seems to have helped individual agencies plan and manage their activities more systematically, there is little evidence that the planning process has forced managers to pay careful attention to the interactions among programs or cross-cutting topics in the health area.

Second, the success of NIH and the SSA's Division of Health Insurance Studies compared with other research organizations seems to point to two important ingredients in successful research management—continuity and an intramural program. Continuity in a research effort implies a stable world for researchers without fluctuating funding levels or personnel policies. It implies research management that is able to take a long view, buffered from day-to-day political pressures. It implies funding research in a way that ensures that studies relate to one another and that the results of research build on one another. HEW's Office of the Assistant Secretary for Planning and Evaluation, NCHSR, and NIMH have not experienced continuity and concomitant stability in recent years.

The importance of a strong intramural effort appears to be an excellent insurance policy when it comes to quality research. As contract research grows, all R&D managers believe that more effective monitoring could be accomplished by researchers who split their time between monitoring and doing research. Researchers are better equipped than administrative contract monitors to ensure the quality and methodology of the research. Additionally, they are more likely to be current in methodological and substantive questions that are of central interest to the research organization.

DISSEMINATION AND USER INVOLVEMENT

NCHSR, ASPE, and the Division of Health Insurance Studies are all organizations that attempt to involve users of social research in R&D decision making. Perhaps the most successful in this regard is the Division of the Health Insurance Studies, if one judges success on the basis of the extent to which policy makers, in both the executive branch and Congress, use the results and place demands on research organizations. The division regularly receives numerous requests from the House Ways and Means Committee and the Senate Finance Committee (plus fewer demands from other legislative committees) and from HEW's Office of the Secretary. NCHSR's new approach is to involve users of research in defining the problems to be tackled. The health insurance experiments and the evaluation studies at ASPE were designed with policy requirements in mind; whether the results will be helpful to policy makers remains an open question.[14]

OMB, on the other hand, would disagree strongly with these conclusions about NCHSR, ASPE, and the Division of Health Insurance Studies. The division would receive some kind words from OMB examiners about the policy relevance of the research, but more frequent observations would be: "health research in no way correlates with the important policy questions" and "there is an inverse relationship between the magnitude of the research information and the seriousness of the problem."

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[14] NIH does not fit into this discussion well since its research is almost totally biomedical and therefore is not the meat of policy makers. To the extent that it is involved in social R&D, its dissemination efforts with regard to appropriate policy levels are not well developed. However, NIH has had a consumer-user minority on each of its National Advisory Councils from their day of creation, beginning as early as 1937.

OMB, for its part, has done nothing to examine systematically the research effort in health. OMB is organized by agency, and thus a careful horizontal review across R&D organizations in the health field has never taken place. OMB's approach to budget examination exacerbates the already fragmented effort; it does nothing to attempt to correct it either systematically or on an *ad hoc* basis. As one OMB official put it: "The R&D analysis tends to be an after-the-fact swipe at agencies in isolation from one another."

Congressional staff opinion on the relevance of social R&D to policy making parallels the OMB assessment, but for different reasons. Staff members on Capitol Hill are in need of policy analysis—collecting the data and information relative to a problem, laying out the alternatives, and fitting the alternatives to various criteria. R&D organizations seldom do that for congressional committees, and when those kinds of proposals are sent to NCHSR by Congress, they either cannot pass the peer review screening (policy analysis is not considered research by many academics) or the results cannot be produced in a timely manner, given the grant review process.

Brokers of research results, like the deputy assistant secretary for health planning and analysis in ASPE or the Robert Wood Johnson Fellows in Congress, are extremely important in overcoming the obstacles created by the variety of purposes and missions that the health agencies and the Congress serve. The organizational complexity in the health area is enormous given the different interests, outlooks, and responsibilities of researchers, service providers, and constituents. Thus the brokers of research play a fundamental role, linking the doers of research with the decision makers in the policy process. Whether there is adequate brokerage in the Executive Branch is a moot question, but the need for more brokers available to Congress and their staffs is apparent and attested to by the congressional staff persons interviewed.

REFERENCES

Abramson, Mark A. (1978) *The Funding of Social Knowledge Production and Application: A Survey of Federal Agencies.* Study Project on Social Research and Development, Vol. 2. Washington, D.C.: National Academy of Sciences.

Executive Office of the President (1972) Improving Health Care through Research and Development. Office of Science and Technology.

Holden, Constance (1973) Mental health reeling over proposed budget cuts. *Science* April 20:284.

Mueller, Marjorie Smith, and Gibson, Robert (1976) National health expenditures, fiscal year 1975. *Social Security Bulletin* (February).

Newhouse, Joseph P. (1976) *A Summary of the Experimental Portion of the RAND Health Insurance Study*. Santa Monica, Cal.: Rand Corporation.

Orcutt, Guy H., and Orcutt, Alice G. (1968) Incentive and disincentive experimentation for income maintenance policy purposes. *American Economic Review* 58 (September): 754-772.

Stetten, DeWitt (1974) Targets. *Science* 185 (July 19):209.

U.S. Department of Health, Education, and Welfare (1975) *Current Federal Health Policy Issues*. Office of the Deputy Assistant Secretary for Health Planning and Analysis.

U.S. Department of Health, Education, and Welfare (1975) *Research in Service of Mental Health: Report of the Research Task Force of NIMH*. Julius Segal, ed. Washington, D.C.: U.S. Department of Health, Education, and Welfare.

U.S. Office of Management and Budget (1976) Special analysis k: federal health programs. *Special Analyses, Budget of the U.S. Government* (January):218.

4 Early Childhood

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INTRODUCTION

OVERVIEW

In American society the welfare of children has traditionally been a responsibility of the family. A National Research Council study (1976), *Toward a National Policy for Children and Families*, noted (p. 9):

> This . . . raises several important issues. One derives from the principle in our society of non-interference in individuals' lives by government or any other organization, particularly in those areas that have traditionally been defined as "private." Exceptions are made only when the public good is clearly at issue, as it has been deemed to be in the requirement that children attend school. Child rearing, by definition, is close to the heart of those private areas defined as off limits to outside intervention. In addition to safeguarding the privacy of individuals, the principle of non-interference also recognizes the malleability of very young children and the presumed right of parents to shape their children's lives in whatever way they see fit, barring outright neglect or deliberate harm to the children.

The principle of limited government intervention is widely defended, even by those who advocate expanding or revising programs that care for, protect, and nourish children and make cash payments to poor families. Since the establishment of the Children's Bureau in 1912, the precedent for a federal role within limited boundaries has existed.

However, the line of demarcation between private responsibility and public obligation to take action is often elusive. Restraint in the use of public intervention has been seriously questioned in the past decade by a developmental philosophy that "argues it is not enough to protect children from abuse and against the most dramatic and evident diseases like polio and blindness, and it is not enough to throw a protective cover over orphans and abandoned children. Without forsaking these activities, it is said, government should reach out to insure the maximum development of every child according to his own potential" (Steiner 1976, p. 3).

Although the outer limits of public activity are still roughly agreed on and the government's responsibility for children without parents, or those who are dependent, abandoned, crippled, or neglected is acknowledged, there are areas that are not so clearly defined or agreed on. Steiner notes that routine child care for mothers who choose to work or preschool programs to enhance the developmental process that occurs in the first five years of life are two areas in which questions are being raised concerning the balance between public and private responsibility.

Since 1912 the federal role in providing for the welfare of America's children has increased substantially—most dramatically since 1960. Fiscal 1960 federal expenditures for cash benefits and programs of services and research for children and youth totaled approximately $4 billion. In fiscal 1976 estimated federal expenditures were nearly $34 billion (see Table 4-1). Although some portion of this apparent increase may be associated with more comprehensive reporting methods, the rise in federal expenditures has been steady and considerable. In large measure these increases reflect rising federal outlays for welfare and unemployment compensation payments to families, although they also reflect significant increases for categorical service programs and for related R&D activities.

Federal programs for the handicapped child (for example, the Early Childhood Education Program supported by the Bureau of Education for the Handicapped, the Mental Retardation Centers funded by the National Institute of Child Health and Human Development), the disadvantaged child (for example, Project Head Start and projects relating to child abuse and neglect supported by the Office of Child Development), and child health care (for example, the Early and Periodic Screening, Diagnosis, and Treatment projects supported by the Social and Rehabilitation Service) are all products of the last decade. Hundreds of specialized programs providing services for target groups—the handicapped, the rural and urban poor, the disadvantaged, children of welfare families—have been established.

Despite the significant increases in federally supported interventions,

TABLE 4-1 Federal Expenditures for Children and Youth (fiscal 1960–1975, $billions)

	Annual Expenditures[a]					
Category	1960	1969	1972	1974	1975 (estimated)	1976 (estimated)
Cash benefits	2.0	4.7	7.0	9.8	12.2	13.8
Health	0.4	1.5	2.3	2.4	2.8	2.9
Food	0.3	0.8	2.0	2.1	2.6	2.6
Education	1.1	5.8	6.9	9.0	10.6	9.3
Manpower programs	-	1.0	1.7	1.9	2.5	2.5
All other	0.2	0.8	1.5	2.3	2.8	2.8
Total for children	4.0	14.6	21.4	27.5	33.5	33.9
Total budget outlays	92.2	184.6	231.9	268.4	313.4	349.4
Percent for children	4%	8%	9%	10%	11%	10%

[a] Estimates prepared by Michael S. March, University of Colorado at Boulder. Based on 1968 Children's Bureau publication *Federal Programs Assisting Children and Youth* originally shaped by Michael S. March and on successive issues of *Special Analyses, Budget of the United States Government, 1968–1976*. Estimates for 1975 and 1976 reflect rising outlays for welfare and unemployment compensation benefits for families hit by economic recession. Figures omit many billions of dollars of special tax benefits affecting families.

SOURCE: *America's Children 1976*. National Council of Organizations for Children and Youth, Washington, D.C., 1976. Reprinted by permission of the Coalition for Children and Youth, 815 15th Street, N.W., Washington, D.C. 20005.

the appropriate government role is still not clearly defined. A massive study contracted for HEW to review federal programs for young children identifies four major purposes that have been pursued in the formation of public programs for children (White 1973, p. 15):

- preparation of children to assume adult economic roles;
- assimilation of children into a national community of shared ideals and values;
- partial regulation of the labor market, including the gradual exclusion of child labor and provision of day care services to allow parents to work;
- provision of services and economic support for children at risk.

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TABLE 4-2 Federal Expenditures for Early-Childhood R&D by Agency, Fiscal 1976

	Funding	
Agency	Amount[a]	Percentage[b]
Agencies supporting program-related research		
Office of Child Development	27.8	7.3
Bureau of Community Health Services[c]	5.8	1.5
Rehabilitation Service Administration	0.1	0.03
Social and Rehabilitation Service	4.2	1.1
Office of Education		
Bureau of Education for the Handicapped	52.3	13.8
Bureau of Elementary and Secondary Education	59.3	15.6
Bureau of Occupational and Adult Education	2.6	.7
Division of International Education	.8	.2
Office of Bilingual Education	59.6	15.7
Office of Career Education	3.6	0.9
Office of Indian Education	10.3	2.7
Office of Planning, Budgeting and Evaluation	8.6	2.3
Right to Read	12.6	3.3
Subtotal	209.6	55.2
Department of Agriculture	1.2	0.3
Department of Labor	0.1	0.03
Department of Justice, Law Enforcement Assistance Administration	1.0	0.3
Subtotal	249.8	65.8
Agencies supporting research under general research and development authorities		
National Institute of Child Health and Human Development	23.9	6.3
National Institute of Mental Health	16.0	4.2
National Institute of Neurological and Communicative Disorders and Strokes	8.1	2.1
National Institute on Alcohol Abuse and Alcoholism	0.7	0.2
National Institute on Drug Abuse	5.1	1.3
National Center for Educational Statistics	8.2	2.2
National Institute of Education	67.7	17.8
Subtotal	129.7	34.2
TOTAL	379.5	100.0

[a] In millions of dollars.

[b] Percentage of total amount of federal early childhood R&D funding ($379,543,740).

[c] These expenditures for research and development on early childhood are in the Maternal and Child Health Services Branch.

SOURCE: These figures were obtained by merging data provided by the Social Research Group, George Washington University, and the Study Project on Social Research and Development, National Research Council.

Yet among both policy makers and researchers the debate continues. The federal government is torn between a responsibility to promote the welfare of the country's young children through a variety of federally supported activities and a formidable set of long-standing concerns operating to limit the scope of these activities. What is the proper relationship between state and local governments and the federal government with regard to young children? What are the appropriate levels of federal and state and local support to ensure efficiency but avoid unnecessary duplication? Will increased federal involvement usurp the traditional functions of families?

In addition to the problem of responsibility, early-childhood policy is uncoordinated. Public involvement tends to be a federal-agency-by-federal-agency, congressional-committee-by-congressional-committee, state-by-state, or city-by-city assortment of unrelated decisions that are as likely to be contradictory as complementary (Steiner 1976, p. vii). In 1976 federal service programs and research and development activities for young children were distributed across 16 separate agencies in HEW as well as in the Department of Agriculture, the Department of Labor, and the Law Enforcement Assistance Administration (in the Department of Justice). There is no point in the federal structure for coordination of these separate efforts, no central mechanism for the systematic planning and development of new initiatives.

SOCIAL RESEARCH AND DEVELOPMENT

Most program agencies conduct research as an aid to program development. In addition, the federal government has supported research on early childhood through its traditional role as funder of knowledge production activities.

In fiscal 1976 the level of federal support for R&D for early childhood (0–9 years) was $379.5 million. Of that amount, $249.8 million was directly related to ongoing service programs and was authorized by separate legislative mandates; $129.7 million was committed to the general increase of knowledge concerning early childhood under general agency R&D authorities (see Table 4-2). Activities supported under general R&D authorities range from applied research and demonstration efforts that contribute to the definition of social problems related to early childhood and the general formation of social policies for young children to basic advances in knowledge concerning the functioning and development of children age 0–9 years.

In 1970 HEW Secretary Elliot Richardson authorized the establishment of the Federal Interagency Panel on Early Childhood Research and Development. Edith Grotberg, director of the Office of Planning and

Evaluation of the Office of Child Development, noted, "What prompted this request was the increased evidence that agencies frequently duplicated research, overlapped research, or ignored important gaps in research." The primary mission of the panel was to "facilitate federal interagency coordination and cooperation in the planning, funding, and analysis of early childhood research and development" (Hertz et al. 1977, p. 3). The panel was created through the Office of Child Development and designed to function as an agency meeting point, not as a superordinate structure dominated by the interests of any agency. Through the Office of Child Development, the panel contracted with the Social Research Group of George Washington University to provide various support functions. The Social Research Group maintains a computerized information system, publishes the panel's annual reports, and conducts a variety of activities to support the work of the panel.

The early childhood panel has been successful in producing a set of generally reliable data detailing the character of federal research activities on early childhood. Three major themes seem to dominate federal research and development on early childhood:

- the federal role in promoting the welfare of young children through cash assistance, categorical service programs, and related research activities has increased markedly since 1912, particularly in the past decade;
- the federal role, though increased, is not clearly defined;
- there is no central coordination for the management of children's programs.

THE SCOPE OF THE STUDY

This paper focuses on the types of research and the management styles of six HEW agencies concerned with early childhood:

- the Maternal and Child Health Service in the Bureau of Community Health Services, Health Services Administration,
- the National Institute of Mental Health in the Alcohol, Drug Abuse, and Mental Health Administration,
- the National Institute of Child Health and Human Development in the National Institutes of Health,
- the Office of Child Development in the Office of Human Development,
- the Social and Rehabilitation Service, and
- the Bureau of Education for the Handicapped in the Office of Education.

These six agencies support nearly half of the projects and account for approximately 34.2 percent of the total expenditures that comprise federally sponsored early-childhood research and development; they were selected for their breadth, diversity, and representative character. More specifically, the projects that these agencies support reflect three major substantive areas of early-childhood research: physical growth and development (the Maternal and Child Health Service, the National Institute of Child Health and Human Development, and the Social and Rehabilitation Service), cognitive growth and development (the National Institute of Mental Health and the Office of Child Development), and social and emotional growth and development (the National Institute of Mental Health and the Office of Child Development). These agencies support the bulk of the research projects focusing on two major early-childhood target populations: the disadvantaged (the Maternal and Child Health Service, the Office of Child Development, and the Social and Rehabilitation Service) and the handicapped (the Bureau of Education for the Handicapped).

In addition, these agencies represent the two broad classes of federal agencies supporting early-childhood research: the service-oriented agencies, supporting operating programs for specifically targeted groups of children and applied research, development, and demonstration activities related to these programs (the Maternal and Child Health Service, the Office of Child Development, the Social and Rehabilitation Service, and the Bureau of Education for the Handicapped); and the knowledge-oriented agencies, supporting knowledge production through support of programs of primarily basic research (the National Institute of Mental Health and the National Institute of Child Health and Human Development).

In general, information was obtained through careful examination of agency budgets, annual reports, planning documents, and internal agency memoranda, when they were available. The data presented in this paper concerning R&D expenditures represent the Study Project's own estimates. They were obtained by merging data produced as a part of the survey of federal social R&D expenditures, conducted by the Study Project on Social Research and Development (see Abramson 1978) with data concerning federal research on early childhood collected by the Social Research Group at George Washington University in support of the Interagency Panel on Early Childhood Research and Development (for further information see Hertz *et al.* 1977). This information was supplemented by a series of interviews conducted in spring 1975 and May and June 1976 with agency research and program staff and budget examiners at OMB.

OFFICE OF CHILD DEVELOPMENT

THE LEVEL AND CONTENT OF SOCIAL R&D

The Office of Child Development (OCD), which is now consolidated in the Administration for Children, Youth, and Families, has a mandate to provide child welfare and child development services. Although directed to serve and support research related to all children regardless of age or economic status, OCD's major target groups include children of families with low incomes, abused and neglected children, children in institutions, children requiring foster care and adoptive services, children of migrant workers and American Indians, and children in need of day care. The director of OCD serves as an advisor to the secretary of HEW, to the assistant secretary for human development, and to other federal agencies on matters relating to the care and social development of children and functions as a point of coordination for federal programs focusing on children and their families.

OCD administers three major programs, each having its own research authority. The Child Welfare Research and Demonstration Program is authorized under section 426 of the Social Security Act and administered by the Children's Bureau. This program is intended to sponsor research and demonstration projects in the areas of child welfare and child development that are of regional or national significance or that demonstrate new, promising approaches to the delivery of child welfare services. Essentially, the program focuses on three areas:

Day Care

Projects address three questions: How can the quality of services be improved? What are the criteria of quality day care? What are the effects of day care on the children served? Most of the research in this area is supported by contracts. Requests for proposals (RFPS) are developed by program staff.

Child Welfare Studies

Projects focus on enhancing the overall delivery system of child welfare services (e.g., developing and demonstrating designs for improved management, administration, and delivery of child welfare services) and improving specific services and components of the child welfare system (e.g., increasing the permanent placement of children either through adoption or through permanent foster care). Most of the child welfare projects are demonstrations with built-in evaluations. Many have a significant technical assistance component. These projects are supported through both grants and contracts.

Child and Family Development

These projects are more difficult to classify, focusing neither on service delivery nor on specific child welfare services *per se*. Projects include studies of family style, developmental continuity, and the interaction of families with social institutions (e.g., schools, clinics). All projects are supported by grants. Staff-developed priority statements and program announcements are mailed to a variety of potential investigators.

The second major program administered by OCD is Project Head Start, a comprehensive preschool program directed primarily at providing developmental services to disadvantaged children and their families. Authorized under a 1966 amendment to the Economic Opportunity Act, the legislation also provides for the support of research, demonstration, and evaluation activities designed to improve the quality and delivery of Head Start services in a number of areas, including education, health (medical and dental), nutrition, mental health, parent involvement, and social services. Examples of experimental demonstration programs initiated by Head Start over the last four years include Home Start, the Child and Family Resource Program, Developmental Continuity, and a project with the collaboration of the Early Periodic Screening, Diagnosis and Treatment projects. Head Start projects are legislatively mandated to include at least 10 percent handicapped children. OCD Head Start program staff coordinate with staff from the Bureau of Education for the Handicapped to identify research needs related to handicapped preschoolers and to build on the findings of R&D activities supported by the Bureau of Education for the Handicapped. The bulk of R&D is conducted in local Head Start projects and is supported by special grants separate from their support-for-service functions.

OCD's third major program is the Child Abuse and Neglect program. The Child Abuse Prevention and Treatment Act of 1974 authorized the establishment of a National Center on Child Abuse and Neglect to be administered by the Children's Bureau. The center must use 50 percent of the appropriated funds for support of demonstration grants to public and private agencies for training activities, establishing regional service centers, and other innovative projects. The act provides authority for research, demonstration, and evaluation activities focused on the causes, identification, prevention, and treatment of child abuse and neglect. About three-quarters of the center's research activities are demonstrations funded through a combination of grants and contracts.

OCD supports a variety of research and development activities. Approximately 38 percent is allocated to basic and applied research activities while 31 percent is allocated for demonstrations, 7 percent for evaluation activities, and 18 percent for dissemination.

Roughly two-thirds of research on early childhood supported by OCD is directed at the development of children age 5 and younger, though the allocation of resources and the number of projects that focus on the infant-toddler group (0-3 years) and the preschool group (3-5 years) is relatively even, according to data collected by the Social Research Group. Approximately $7 million was expended for 53 projects related to children age 0-3 years in fiscal 1976, while approximately $8.7 million was expended for 69 projects related to children age 3-5 years. Just less than one-third of agency resources supported R&D for children in the kindergarten through grade 4 group (5-9 years).

A substantial portion of agency expenditures are for research related to all children, including those whose cognitive, physical, and emotional development is considered normal: approximately $14 million in fiscal 1976, according to the Social Research Group. However, the majority of funds support research on children with special characteristics or handicaps, particularly children who are dependent, abused, neglected, or socially and culturally deprived. According to data collected by the Social Research Group, approximately $31.6 million was expended for children in these categories in fiscal 1976.

THE PLANNING AND MANAGEMENT OF SOCIAL R&D

Each year, in accordance with Office of Human Development R&D planning procedures, OCD conducts a research planning effort to identify information needs for achieving its goals as they relate to the needs of the agency's ongoing service programs and concerns related to child welfare. Agency staff members carry out reviews of the current status of knowledge based on past and present R&D activities. They identify knowledge gaps through preparation of state-of-the-art papers and support projects that address these gaps. Outside sources are also consulted. A major source of direction is the Interagency Panels on Early Childhood and Adolescence, which are composed of federal agency representatives whose offices sponsor research on children. OCD staff hold conferences approximately three times a year, which are attended by HEW regional representatives. Conferences are also held annually for technical organizations and university-based investigators in order for the agency to learn the views of members of the research community regarding R&D needs. Based on information obtained from all these sources, OCD staff prepare a research plan. HEW regional staff are asked to comment on the plan, which is reviewed and approved by the assistant secretary for human development and the assistant secretary for planning and evaluation in HEW. State officials have little opportunity for formal input in R&D planning since HEW regional staffs have neither the time nor the resources to solicit and analyze their views on research priorities.

Research planning and the establishment of substantive research priorities in each of the three major programs administered by OCD are the responsibilities of program staff. In the Head Start and Child Abuse and Neglect programs, areas for research investment emerge from the needs of the operating service projects. Based on informal consultation with field personnel, OCD staff members set research priorities. For the Head Start Program, R&D investments are equal to approximately 10 percent of the total program appropriation; for the Child Abuse and Neglect program, R&D expenditures are 50 percent of the total program appropriation.

Despite Head Start's close links to the operating programs and the inclusion of field personnel in planning activities, the establishment of research priorities for Head Start is complicated by lingering confusion over the program's purpose and the designation of appropriate criteria for measurement. Is the primary objective of Head Start to raise the IQs of disadvantaged children, or is it to attend to the special medical, nutritional, and developmental needs of these children? The question has never been resolved. In fiscal 1976, R&D activities associated with Head Start were intended to improve planning and management in local Head Start projects and to improve performance in the areas of education, parent involvement, social services, medical, dental, and mental health services, and nutrition services. Special attention was given to enhance the capacity of local projects to serve children with special needs (i.e., handicapped children, bilingual populations, Indian and migrant children, and those who are geographically isolated). R&D efforts were made in six programs:

The Child and Family Resource Program uses Head Start as a base to develop a community-wide system for linking a variety of programs and services to children and their families. It is a demonstration program intended to develop a number of models or approaches for integrating and coordinating programs to provide a continuity of services to children.

Home Start Training Centers provide field-based, experience-oriented training for staff delivering home visitor services as components of Head Start projects.

Project Developmental Continuity is intended to enhance the social competence of children participating in Head Start by developing models for developmental continuity from preschool through the early primary school years.

The Bilingual-Bicultural Preschool Curriculum Development Project is one facet of a four-part effort to build the capacity of Head Start to serve Spanish-speaking children and their families.

Head Start-Medicaid Early Periodic Screening, Diagnosis and Treatment Projects (EPSDT) are intended to encourage local Head Start programs to make maximum use of EPSDT to provide and pay for medical services for Medicaid-eligible children. Local programs are encouraged to enter agreements to collaborate with state Medicaid agencies.

The Parent Education Curriculum for Head Start Parents is a program supporting the development of *Exploring Parenting*, a program to be tested in 20 Head Start projects before being revised for publication and implementation in all local Head Start projects.

The Child Abuse and Neglect program follows a pattern similar to the Head Start program in the establishment of research priorities and has been similarly criticized for lacking a clear focus and set of outcome objectives. The OCD research plan for fiscal 1976 states that R&D projects supported in this area are designed to increase knowledge about the causes, nature, extent, consequences, prevention, identification, and treatment of child abuse and neglect, and to improve services to abused and neglected children. Some of the projects are direct demonstrations of services; others combine demonstrations with research.

In the Child Welfare Research and Demonstration Program, planning processes are similar to those in the other two major OCD programs. The major difference is in the fact that OCD has no service authority to operate day-care centers, foster homes, or child adoption agencies and therefore lacks the direct link with providers of these services. Research questions focus on service quality and delivery based on a set of fairly clear-cut, identifiable problems associated with these areas and on more substantive questions dealing with the objectives of day care, foster care, etc. (e.g., how to measure its impact, standards of day care) and expectations of the results and benefits of day care (e.g., is it worth the cost?). However, the fact that state officials are not direct participants in R&D planning in these areas has, from the perspective of service providers, diminished the applicability of much of this research. A study by the General Accounting Office of the use of the results of research supported by OCD emphasizes the need to include potential users of R&D results more effectively in these areas of R&D planning (General Accounting Office 1978).

The Child and Family Development projects within the Child Welfare Research and Demonstration Program are different from others because they are not necessarily tied to existing service programs in the field. There is no particular set of practitioners or researchers to ask for information. The focus of research priority is broad, ranging from the provision of a knowledge base for a national policy in child and family policy to the establishment of an information capability concerning the status of children and programs.

All these projects are supported with grants. Research priority statements, developed primarily in-house by the Research and Evaluation Division staff, are distributed to a broad group of prospective performers, including individual researchers, universities, and public and voluntary agencies. Creativity and innovation are encouraged. Research issues are guided by OCD priority statements, but the design of individual projects is largely determined by prospective grant applicants, generally university-affiliated researchers. Although the agency has supported conferences on several topics within the scope of the child and family projects (the Interagency Panel on Early Childhood and Adolescence conferences on the family and home-based programs), links with those outside Washington appear weaker than in other R&D programs and are mostly limited to a small network of familiar academic researchers.

The Office of Human Development and the Office of Planning at OCD are concerned with improving the general management of agency research and increasing the level of agency responsibility and accountability for the research it supports. The adoption of a goal-oriented planning process has actively encouraged agency program offices to develop capacities for conceptualizing the scope, design, and methodologies for future R&D projects. Insofar as program offices can specify the basic nature of the research to be performed or the product desired, the research contract is recommended as the appropriate support mechanism. However, some agency program staff are chafing at the "guidance" provided by the Office of Human Development and the Office of Planning. They view the push for increased management of research as a thinly veiled attempt to increase the level of contract support that is motivated by desire for program control. They regard contracts as means of stifling investigator creativity and discouraging investigator-initiated proposals.

With the exception of Head Start research grants, which are reviewed by a staff review committee, grant applications are reviewed by the OCD Research Review Committee, an independent advisory body composed of 20 professionals outside the federal government representing a number of academic disciplines. Applications are reviewed according to criteria of scientific merit and relevance specified by agency staff. The review committee votes to recommend, approve with stipulation, disapprove, or defer with a request for additional information. Committee members individually indicate their preferred order of funding for those projects recommended for approval. OCD research staff functions primarily as staff to the review committee; however, they can make specific project recommendations to the director, who has final award authority. Only on rare occasions does the director, either independently or at the urging of agency staff, overrule the recommendations of the review committee.

Contract proposals are reviewed by an *ad hoc* committee of scientists outside the federal government representing a range of biomedical and social science disciplines. Upon approval by the review committee, a proposal is reviewed again internally to evaluate its general quality and responsiveness to the requirements specified in the RFP. Recommendations of the review committee and the staff are forwarded to the director, who makes the final award decision.

OCD supports R&D activities by a variety of types of performers. According to data collected by the Social Research Group, only about $8 million (29 percent) of fiscal 1976 allocations were made to university-based researchers. Corporate organizations including for-profit and not-for-profit firms, received roughly $14.9 million (55 percent) of fiscal 1976 expenditures. OCD supports research by these types of organizations to a greater extent than any of the other agencies surveyed that support research on early childhood. Additionally, OCD gave approximately $4.3 million (16 percent) of its total R&D allocations to government organizations, primarily state-level agencies for capacity-building activities.

DISSEMINATION AND USER INVOLVEMENT

Beginning in fiscal 1974, all grant applications were required to include plans for dissemination of the results of the research. Applicants are not required to set forth formal plans for dissemination but rather to include simple statements of intent: "I will submit a paper detailing the results of my research to a number of journals" is adequate. In some cases demonstration projects (day care, child welfare, and child abuse) are required to provide a listing of local agencies that are potential supporters of the demonstrated service once federal money is phased out.

In fiscal 1974 a system of policy implication papers (PIPS) was introduced in the hope of linking R&D data and information with policy issues and decisions. PIPS are essentially in-house documents designed to provide a synthesis of individual research findings, setting out some practical forms of use. PIPS are a response to the questions, "What can you do with this research? What practical use does it have?"

Program directors are responsible for implementing PIPS. Initial drafts are usually prepared by the project officer within 60 days of project termination and circulated to program heads for review and comment. The guidance suggests a format that distinguishes among findings (the results of projects), implications (policy directions inferable from findings), recommendations, and responsibility for the implementation of the recommendations. The guidance states (p. 28):

> The Program Director should hold meetings at least monthly with his top staff to discuss the recently prepared PIPS, and to take action, as appropriate. In addition, it is necessary to establish a PIP management file and system to insure the prompt development, review, revision, and final discussion [with the Program Director] of every PIP.
>
> If the speed and effectiveness of the PIP process are seriously suffering, it may be desirable to cease funding all new R&D projects until the problems are rectified, and/or the ASHD [Assistant Secretary for Human Development] may find it necessary to assume the responsibility of supervising the PIP process.

PIPS have generated some staff resistance, primarily because of what are considered to be unrealistic expectations inherent in demanding policy implications from individual R&D projects without benefit of findings from other similar projects or research. It is difficult to ascertain to what degree PIPS are used by agency decision makers.

The previously cited report by the General Accounting Office is critical of OCD's dissemination efforts. According to that analysis, providers of services were using the results from 20 nationally significant R&D projects supported by OCD only 38 percent of the time, and coordinator and advocate groups were using these results only 21 percent of the time. Use of information from other projects was even less frequent—only 12 percent of the time, according to the analysis. Accordingly, the report recommends that dissemination efforts be increased by (1) funding special dissemination and technical assistance efforts for research and demonstration projects that have developed successful results with potential for improving services to children, (2) giving potential users of research and demonstration results an influential role in planning, (3) earmarking a "reasonable percentage" of the agency R&D budget for dissemination and utilization activities, and (4) giving HEW regional staff a more influential role in R&D planning and dissemination activities (General Accounting Office 1978, pp. i–ii). HEW has agreed with most of these recommendations and planned or proposed actions are responsive to them. However, HEW believes that the recommendation to fund special dissemination and technical assistance will require increased staff and funding resources and an expansion of the authority under section 426 of the Social Security Act.

SOCIAL AND REHABILITATION SERVICE

THE LEVEL AND CONTENT OF SOCIAL R&D

The Social and Rehabilitation Service (SRS) was established to provide support to states, local communities, and individuals for social rehabilitation, income maintenance, and medical and welfare services for the economically disadvantaged.

In 1976 SRS was organized into three relatively independent administrations, each having separate program responsibilities and each directed by a commissioner who is responsible to the SRS administrator:

- The Medical Services Administration administers the Medicaid program, including the Early Periodic Screening, Diagnosis and Treatment program, which provides physical and mental health and developmental services to children through the states.
- The Applied Payments Administration administers the Aid to Families with Dependent Children program, which provides cash assistance to poor families.
- The Social Services Administration administers general community service programs, including child welfare, day care, and protective services.

Research and development programs are administered under the auspices of the Office of Planning, Research, and Evaluation (OPRE). The primary objective of its R&D investments is "to discover, test, and promote the utilization of new social service concepts which hold promise of more effectively assisting vulnerable populations." OPRE supports early childhood research and demonstration activities under three authorities:

- Cooperative Research and Demonstrations (authorized by Section 1110, Title XI of the Social Security Act). This program is designed to contribute to existing knowledge and devise and evaluate innovative approaches to the prevention and reduction of economic dependence and the more effective administration of social welfare programs. Projects receiving support include assessments of the cost-effectiveness of different types of child day care, development of alternative approaches to foster care and adoptions, and studies of child abuse and neglect. Contracts are the predominant funding mechanism under this authority.
- Demonstration Projects in Public Assistance (authorized in 1963 by Section 1115, Title XI of the Social Security Act). This matching-grant demonstration program focuses on the development and improvement of service delivery techniques; states assume 75 percent of project costs. The Early and Periodic Screening, Diagnosis and Treatment (EPSDT) demonstration projects are supported through this program.[1]
- Child Welfare and Research Demonstrations (authorized in 1960 by Title IV, Part B, Section 426 of the Social Security Act). The purpose of this grant program is to help sponsor special research or demonstration projects on child welfare and child advocacy. Current Section 426 funds are vestiges of a large child welfare program that existed in SRS when it housed the Children's Bureau. When the bureau was moved to the Office of Child Development in 1973, more than 90 percent of the Section 426 funds were transferred with it.

It is important to note that research and development represent a small portion of the SRS budget, since the major role of the agency is support for the provision of income maintenance and social services to the poor. In fiscal 1975 SRS expended $7.2 billion directly benefiting children and their families; a summary report for 1975 notes:

> Of the $7.2 billion in program activities identified as benefiting children, financial assistance under the AFDC program accounts for 63.7% ($4.6B). Programs which support the provision of services—i.e., Medicaid, social services, WIN child care, child welfare services—represent 36.1% ($2.6B). Child welfare training, research, and evaluation and monitoring activities account for less than .15% ($10.85M) of the dollar value of SRS activities directly related to children.

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[1] For additional information on the EPSDT demonstration projects, see Hayes (1980).

In fiscal 1976 SRS R&D projects in the early childhood area were funded solely by grants. Expenditures primarily supported demonstrations; approximately 50 percent of total agency resources for research and development. Only about 27 percent was expended for applied research activities, about 12.7 percent for evaluation, and about 9.1 percent for dissemination activities. Evaluations are required for demonstrations but are funded as components (usually 10 percent) of individual projects.

According to data collected by the Social Research Group, SRS expenditures for early-childhood research are relatively evenly distributed across age-groups (i.e., infant-toddler, preschool, and kindergarten to grade 4). Since the focal point of agency programs is the family, R&D activities are not generally directed at children in particular age-groups. Even the EPSDT program, which is targeted at children rather than their families, does not emphasize distinctions among children of different ages.

SRS research and development expenditures, according to the Social Research Group, are primarily directed to all children, including those whose cognitive, physical, and emotional development is considered normal. Only $0.2 million is used to support R&D activities focused on children having special characteristics or handicaps. The SRS target population is the poor: thus, individuals having other special characteristics, such as physical or mental health problems or handicaps, are not segregated from those without such special characteristics.

THE PLANNING AND MANAGEMENT OF SOCIAL R&D

Research decision making at SRS is highly centralized. OPRE assumes major responsibility for setting research priorities and making resource allocations. In theory these decisions are made in consultation with and upon the approval of the operating program staff in the three administrations. Formally, the purpose is to develop R&D priorities that meet the special information needs and strategies of the major operating programs. However, in practice there appears to be little consultation and coordination between R&D and program staff. For the most part, research planning decisions are made by the associate administrator for planning, research, and evaluation, as he said, "within an atmosphere of general consensus with the Commissioners [of the program administrations] and the Administrator [of SRS]. The consensus doesn't go too deep, but it's getting deeper!"

Antagonism has developed between research staff and the staff of program administrations concerning the research planning process.

OPRE staff, anxious to maintain control over the research budget, have been reluctant to solicit or accept the advice of program staff concerning the establishment of research priorities and the section of investigators. The breach is particularly pronounced in the Early and Periodic Screening, Diagnosis and Treatment (EPSDT) program, which accounts for the largest portion of early childhood R&D supported by SRS. OPRE, in cooperation with the Medical Services Administration, funds five demonstration projects to "develop and test viable, cost-effective techniques and practices" for case finding, screening, diagnosis, treatment, and case management of health services for children (Hayes 1980). A memo written by an EPSDT program staff member in response to a document issued by OPRE explaining general R&D policy considerations and priority areas illustrates some of the tension:

> The Planning Process outlined under B also reflects the lack of consideration given to program needs as expressed by the EPSDT Division. It clearly states that only issues which can be *validly researched* are selected for inclusion and SRS R&D makes that determination. It also develops projects from issues they select, and then solicits comments from the operating division. However, little, if any, consideration is given to such comments when received.
>
> As a result, the R&D effort is largely research on issues decided upon by SRS R&D; its value to the EPSDT program in this form is very limited.

The effect of this lack of cooperation in research planning has been to seriously diminish the utility of the demonstration projects to the operating program.

OPRE is making an effort to make research and demonstration projects more relevant to program policy. A management practice whereby a research program liaison relays ideas from program staff through the commissioner and back to OPRE has recently been adopted. However, communication links are only slowly being repaired. The actual payoff from this measure has yet to be realized.

Tensions between research staff and program staff have been further aggravated by frequently changing leadership in SRS. Staff vacancies in the Office of the Administrator as well as in OPRE and the program administrations have occurred often in the past several years and have frequently remained unfilled for months at a time. Staff at lower levels in SRS readily admit their frustration caused by the lack of management continuity. Coupled with the large-scale transfer in recent years of several of SRS's program responsibilities, high turnover among the agency leadership has accentuated an atmosphere of internal rivalry and has diminished the effectiveness and utility of R&D investments.

Although SRS has both contract and grant authority, all research on early childhood is supported by grants. Detailed grant solicitations are frequently printed in the SRS monthly newsletter, which is circulated to state and local welfare agencies. However, the OPRE administrator admitted that the response to these solicitations has not been satisfactory. The number of applications received has generally been quite low, and the overall quality of applications has not been so high as expected. In most cases, OPRE staff cite a lack of sophistication in the research design as the reason for the inadequacy.

As a first step in the review process for grant applications, OPRE staff members screen grant application concept papers, which are three-to-five-page statements that precede the formal application and present project objectives, methodological approach, funding requirements, projected results, and investigator qualifications. Occasionally, when additional staff expertise in screening seems called for, these concept papers are routed to the Research and Evaluation Division of the Office of Child Development for additional comment. This preliminary screening is intended to sort out applications that are not relevant to agency program interests and to permit research staff an opportunity to have some input in project formulation. Those investigators whose concept papers pass the initial screening are invited to submit full proposals for a second-stage review of scientific merit and program relevance. Review committees are composed of OPRE staff and selected outside experts. Occasionally, applications presenting particularly complex methodologies are sent to outside technical consultants for further comments. However, review is primarily conducted in-house. Standards for review appear in an OPRE memorandum:

> The review of new SRS research and demonstration proposals and continuations will be based on their relevance to SRS R&D objectives, their potential impact, technical and scientific adequacy, as well as the capability of the prospective grantee or contractor organization to carry out the indicated scope of work.

The recommendations of the review committees are forwarded to the administrator of OPRE for final award.

Decisions concerning the selection of performers are made almost entirely within OPRE. Outsiders are concerned only when this seems particularly useful or desirable to OPRE staff. Staff of the program administrations have no formal role in this process and seem to be consulted rarely. According to data collected by the Social Research Group, the vast majority of SRS R&D resources support projects being conducted by governmental organizations. Approximately $1 million was allocated to state and local social services agencies in fiscal 1976. Only about $0.2 million supported research by university-based investigators, and no funds were allocated to performers in for-profit and not-for-profit research organizations.

DISSEMINATION AND USER INVOLVEMENT

SRS requires grantees to describe plans for the use of research results and encourages investigators to publish their research findings. Interviews with OPRE staff indicate that they recognize dissemination as a major responsibility of the agency; however, these sentiments seem to be statements of intention rather than comments on actual practices. In the EPSDT program in particular, dissemination has been a major problem. Although state agency administrators are "crying for assistance because they don't know how to manage these services," federal officials admit that SRS is doing little to ensure that information obtained from the demonstrations is transmitted to potential users (Hayes 1980):

> Findings from the evaluation have emphasized that effective EPSDT service delivery requires integration and coordination of available resources, institutions, and manpower at the local level. Yet SRS has done little or nothing to see that pertinent how-to-do-it information reaches those in the local community who may be instrumental in accomplishing that integration.

From our assessment, there is little that is encouraging about the current OPRE approach to defining and supporting research useful to the needs and interests of the operating programs under SRS responsibility, or about the current approach to ensuring that information gained from R&D investments is made immediately available to those who need it most.

THE NATIONAL INSTITUTE OF CHILD HEALTH AND HUMAN DEVELOPMENT

THE LEVEL AND CONTENT OF SOCIAL R&D

In 1974 the National Institute of Child Health and Human Development was reorganized. In the reorganization the Gerontology Research Center and the Adult Development and Aging Branch were relocated in the National Institute on Aging. The National Institute of Child Health and Human Development (NICHD) consolidated child-related research activities in two major centers, the Center for Population Research and the Center for Research on Mothers and Children.

The Center for Research for Mothers and Children incorporates three branches, all of which support research on early childhood. The Pregnancy and Infancy Branch supports research on sudden infant death syndrome, babies with low birth weights, maternal health, and embryonic and fetal development. The Mental Retardation and Developmental Disabilities Branch supports research in the epidemiology and etiology of mental retardation, genetic and metabolic disorders, and the prevention, early diagnosis and treatment of mental retardation. The Growth and Development Branch funds projects in physical growth and maturation, nutrition, behavioral, cognitive, and social development, behavioral biology, and developmental immunology. The vast majority of research allocations made by all three branches of the Center for Research on Mothers and Children supports basic biomedical research. The remaining portion of research allocations supports social and behavioral research, with an emphasis on early postnatal periods, infancy, and the developing child. The institute maintains 12 mental retardation research centers, conducting multidisciplinary and collaborative biomedical and behavioral research on the causes and amelioration of mental retardation and developmental disabilities. Most of these centers are university-affiliated facilities across the country.

In 1975 the institute initiated a new research program, the Major Research Programs for Mothers and Infants, which are directed at infant survival. The programs address a variety of research problems and needs relating to infant mortality and morbidity and are organized around problem-need themes (e.g., how labor begins, maternal and infant nutrition, and fetal development). This research program is a response to the growing recognition that mother health and infant health are interdependent from the time of conception.

Approximately 90 percent of research funds allocated by NICHD for activities in early childhood research are grants. The majority of these awards are made in response to unsolicited applications from investigators; however, the institute occasionally solicits grant applications. The *Forward Plan 1978-82* states, "NICHD will initiate research to determine the developmental antecedents and correlates of three disorders of childhood—dyslexia, hyperkinetic behavior syndrome, and infantile autism." In addition to general solicitations sent to prospective investigators, each of the branches may issue requests for applications, which present broad statements of program priority that are sent to universities and researchers to stimulate research activity in a specific area.

Roughly 10 percent of institute-supported research activities is funded through contracts. The level of contract research has remained relatively constant over the past several years, and there is little likelihood of an increase. NICHD issues requests for proposals (RFPS) for only two purposes: to procure research materials (e.g., animal colonies and immune sera) and to stimulate advances in narrow areas of research for which there is a high probability of significant accomplishment. Research on sudden infant death syndrome is exemplary in this regard. Before a flurry of congressional interest, research, and the release of an institute RFP for research, there had been little research attention to the syndrome. In general, contracts are used for more routine procurement rather than to create interest in broadly defined areas.

In fiscal 1976, NICHD resources primarily supported basic research activities, 98.7 percent of its total research expenditures. Only 1.3 percent was allocated to other types of R&D activities, most notably dissemination efforts. Only a small portion of institute expenditures was for evaluation, demonstration, or the development of materials.

The greatest concentration of NICHD expenditures for early childhood research is for projects that focus on the infant-toddler age-group (0-3 years). According to data collected by the Social Research Group, approximately $14 million was allocated for 166 research projects. Significantly less attention is paid in terms of expenditures and number of projects to children of preschool age (3-5 years) and to children from kindergarten to grade 4 (5-9 years).

A substantial portion of institute expenditures is for research related to all children, including those whose cognitive, physical, and emotional development is considered normal—approximately $12 million in fiscal 1976, according to the Social Research Group. However, the majority of funds supports research on children with special characteristics and handicaps, for example, communicative disorders, neurological problems, and mental retardation. A total of approximately $37.3 million was expended for research of this type in fiscal 1976.

THE PLANNING AND MANAGEMENT OF SOCIAL R&D

Decisions concerning resource allocations among the institute's various program areas are made by the director in consultation with the executive-level staff, including the directors of the Center for Population Studies and the Center for Research on Mothers and Children, the heads of the major research programs, and the institute's National Advisory Council. Responsibility for research planning is also shared by this group of individuals, although the primary center of planning activities is in the Office of the Director. In his role as chief of research planning, the director has the discretion to call on the advice of experts inside and outside the institute to inform decisions concerning the establishment of research priorities and the allocation of resources. In fiscal 1975 several task forces of outside experts including both biomedical and social scientists were appointed to conduct state-of-the-art assessments in specific topic areas. The activities of these task forces provided guidance for future institute support of research on mental retardation, developmental biology, genetics, congenital malformations, and dyslexia. The selection of these topics was made by the director with advice from the executive-level staff and the institute's advisory council. In addition to these *ad hoc* task forces and as part of a continuing effort to initiate research efforts in areas of special concern, the director called for several special in-house program staff planning sessions on topics such as the initiation of labor and sudden infant death syndrome as well as an in-house conference on teenage pregnancy.

The director conducts weekly meetings with executive-level staff and bimonthly meetings with branch chiefs to review current activities, to discuss substantive and management problems, and to explore new areas of research potential. Branch chiefs and program staff have some influence on research decision making, particularly in suggesting areas for future research, developing requests for applications, and encouraging specific applications from researchers in the field. The director and the senior staff also solicit advice from outside experts. Despite formal agency channels, communication through the staff ranks seems to be weak. It appears that advice from outside experts is solicited more frequently and is more influential than recommendations from institute program staff. On more than one occasion program managers most directly affected by particular decisions have not been consulted about plans or changes relevant to their research programs. The Study Project observed that the staff at the program level frequently has little sense of overall institute direction. Program officers tend to be familiar only with their own narrow domains of research management and have little knowledge of activities in other parts of the institute.

Within NIH, the National Advisory Council associated with each institute plans a variety of research planning and policy-making roles. Councils are composed of 16 members, half of whom must be authorities in the scientific fields directly related to the program interests of the institute. The other half are lay members selected for their interests or activities in areas related to the institute. Some of the national advisory councils actively participate in institute decision making, taking a lead role in identifying potential directions for future research and influencing the allocating of resources to stimulate increased activity in particular areas. Others are less active. The influence of a council on institute decision making varies among the institutes and is largely dependent on the strength of individual council members. It is the judgment of the current director of NICHD that the quality of its council members has not been unnecessarily sacrificed for political considerations. Nevertheless, there appears to be a general dissatisfaction with the council nomination procedure[2] and a widely shared view that until quite recently the NICHD council was too passive, plagued by unfilled vacancies and weakened by purely political appointments. An article in *Science* (October 31, 1974, p. 443) noted: "The appointment of both lay and scientific advisors to NIH is very much a political affair. A prestigious appointment to NIH is vulnerable to the demands of patronage."

At NICHD, council members, outside experts, and selected program staff participate in problem-oriented research planning committees. Participants are provided with data detailing ongoing institute activities and are asked to review excesses and gaps in institute-supported research activities and to identify new directions for future research support. The findings of special task forces often influence the recommendations of planning committees.

NICHD follows the standard NIH dual review procedure for grant applications. Applications are submitted to the Division of Research Grants in NIH, where they are initially sorted and assigned to study sections and to the institute having relevant research jurisdiction. Study sections are independent from the institutes and tend to function autonomously. They are organized around various scientific disciplines and composed of 10 to 15 expert scientists outside the federal government. Study sections meet three times each year to review and evaluate research grant applications for scientific merit. Initially, study sections vote to approve, disapprove, or defer each application. Approved applications are then assigned a numerical priority score. Decisions that determine the institute research portfolio—which projects the institute will support and which it will reject—rest largely with the study sections. Only rarely does program staff counter the recommendations of a study section.

Whatever their role in planning, the national advisory councils of the institutes are potentially quite influential, since they have to approve all research grants and contracts. Applications that receive study section approval are sent to the various national advisory councils for final review and approval. The NICHD council reviews applications for relevance to institute programmatic priorities against a rather broad set of criteria that include concerns for the initiation of promising new directions for research and other "matters of policy." The council approves or disapproves most applications *en bloc*; few applications are reviewed individually or in detail. The council can vote to recommend approval, to recommend disapproval, or to return the application to the study section for additional review. Additionally, applications that have received high-priority ratings by the study section may be recommended for approval and applications with lower ratings placed on an approved but unfunded list. It is rare that the council overrides study section recommendations. Following its review, the council presents its recommendations to the institute director, who has final authority in funding decisions. It is important to note, however, that the director of NICHD seldom acts unilaterally, functioning more as a broker by bridging gaps among institute staff, advisory council, and scientific investigators.

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[2] As council vacancies occur, institute staff review the field of potential nominees and recommend a primary and an alternate candidate to the secretary of HEW for each vacancy. Appointments are made by the secretary. A number of criteria are influential in selecting council members: expertise in particular substantive areas, sex (NIH is aiming to staff one-third of the council slots with women), and geographical balance. Although a candidate's political affiliations are not taken specifically into account, vocal or conspicuous individuals are avoided.

Contracts are initially reviewed by an *ad hoc* committee composed of scientists outside the federal government. Occasionally additional outside review is solicited. After a contract is approved by the *ad hoc* committee, the NICHD in-house contract review committee conducts a second review evaluating the general quality and the degree to which the proposal meets the needs specified in the RFP. Recommendations of the review committee are sent to the institute director, who makes the final award decision.

The vast majority of NICHD-supported research projects are performed by academic investigators. Researchers in university-affiliated medical schools and other graduate professional schools receive two-thirds of all institute research awards, according to data collected by the Social Research Group. Only one-third of all projects are performed by government organizations or private for-profit and not-for-profit firms.

DISSEMINATION AND USER INVOLVEMENT

NICHD reflects the basic NIH attitude toward the dissemination of research results: dissemination is a responsibility of the individual investigator, not of the institute. In submitting applications or proposals, investigators are not required to prepare plans for dissemination or utilization activities. Institute dissemination efforts center in the Office of Research Reporting. With assistance from staff scientists and program personnel, general materials are prepared for the public, which present emerging research findings, and occasionally articles are provided for publication in scientific journals.

MATERNAL AND CHILD HEALTH SERVICE

THE LEVEL AND CONTENT OF SOCIAL R&D

The primary functions of the Maternal and Child Health Service (MCHS) in the Bureau of Community Health Services are to help the states extend and improve maternity clinics, classes for expectant parents, well-child clinics, school health examinations, and similar services for "at-risk" mothers and young children. Ninety percent of the MCHS budget is designated for formula grants to the states. Each state is required to operate a program of maternal and infant care projects, intensive infant care projects, projects of children and youth, and family planning and dental care projects.

Section 512, Title V of the Social Security Act authorizes grants "for research projects which show promise of substantial contribution to the advancement of maternal and child health services and crippled children's services." Special emphasis is given to "studies of the need for and feasibility and effectiveness of comprehensive health care programs in which maximum use is made of health personnel with varying levels of training" (Maternal and Child Health Service 1973, p. 46). Maternal and child health R&D initiatives are directed to improving the effectiveness and management capabilities of service delivery projects. Research grants are awarded annually in mental retardation and learning disorders, prenatal development, child abuse, dental services, and the effects of maternal drug addiction on infants (Maternal and Child Health Service 1973).

All MCHS R&D activities are supported by grants. Grant applications are almost exclusively unsolicited investigator initiatives, although general program announcements are developed for some demonstration activities. The agency has no authority to award contracts. No research is performed in-house.

The bulk of MCHS-supported R&D activities are demonstrations, which account for approximately 68 percent of fiscal 1976 expenditures. Only 10 percent of the fiscal 1976 R&D budget supported applied research activities, and only 22 percent supported dissemination activities. The remaining 2 percent was allocated for evaluation and the development of materials.

According to data collected by the Social Research Group, the vast majority of MCHS R&D expenditures support projects focused on children in the infant-toddler age-group. In fiscal 1976, approximately $4.2 million supported 61 projects directed at children 0-3 age years. Expenditures of $2.1 million supported projects focused on children in the preschool age-group (3-5 years), and $1.7 million was expended in support of projects for children in the kindergarten to grade 4 age-group (5-9 years). Given MCHS's origins as a program intended to help curb infant mortality, this concentration of R&D funds in the earliest age-group is not surprising.

A substantial portion of MCHS R&D activities is directed to all children, including those whose cognitive, physical, and emotional development is considered normal—according to the Social Research Group, $2.8 million in fiscal 1976. Nevertheless, as with other agencies responsible for the provision of child health and welfare services, the bulk of R&D expenditures, $6.7 million in fiscal 1976, supported research and development related to children with special characteristics or handicaps.

THE PLANNING AND MANAGEMENT OF SOCIAL R&D

MCHS is the only program within the Bureau of Community Health Services to have a broadly defined research function. The bureau is predominantly involved in the provision of health and welfare services to designated target populations, including the aged and the handicapped. All MCHS R&D activities are administered by the bureau's Division of Clinical Services; however, research planning is shared among three groups of in-house participants: the Office of the MCHS Director, the bureau's Health Services Improvement Branch, and the bureau's Health Services Quality Branch.

The Office of the Director of MCHS assumes responsibility for establishing program objectives and standards, administering research programs, and assisting with the development and dissemination of research results. In consultation with members of the staff and through informal surveys of concerns among state agency officials responsible for the implementation of maternal and child health programs, the director develops a set of R&D priorities. Priorities for research activities are intended to be responsive to the special needs of MCHS in its organization, management, and delivery of services. In fiscal 1976, special emphasis was placed on research studies and demonstration activities to explore the feasibility and effectiveness of providing maternal and child health care services by health professionals with varying levels of training.

Formal R&D planning activities by this office are limited. From interviews with agency staff in the Office of the Director, it is clear that elaborate, formal planning processes to establish goals and priorities are not ignored because of disinterest on the part of the director or staff. Instead, the shortage of personnel and resources resulting from successive cuts in the MCHS budget has limited the availability of funds and personnel to organize large planning conferences, to convene state and regional program administrators routinely, and to integrate systematically the concerns of researchers in developing an ambitious and innovative R&D plan. Research planning and the specification of research priorities is performed in-house in an apparently pro forma way.

The Health Services Improvement Branch of the Bureau of Community Health Services is responsible for most of the day-to-day management of research projects in MCHS. It administers the applied research grants program, which includes providing technical assistance and consultation for ongoing projects, collecting and analyzing research findings, and promoting the dissemination and use of research results. The role of this branch in planning for maternal and child health R&D activities is one of consultant to the MCHS director. Staff members review the research priorities that are specified by the MCHS director and staff, directing their comments specifically to the relevance of the priorities to the needs of the administrators of ongoing programs. Again, because of shortages in staff and resources, formal planning activities carried out by this branch for MCHS projects are of limited scope. Other functions performed by this branch, such as collecting and analyzing research findings and promoting dissemination and use of research results, are similarly limited for MCHS projects. More often than not "collecting and analyzing research findings" involves ensuring that final reports are submitted to the agency and occasionally preparing abstracts or executive summaries of the findings. "Promoting dissemination and utilization" involves sending executive summaries of project findings out to state agency administrators whose names are on a mailing list.

The Services Quality Branch of the Bureau of Community Health Sciences serves as a liaison between the agency and interested public and voluntary organizations. Among its responsibilities is that of translating health care service delivery research into policies and procedures appropriate for field testing. In practical terms this means advising during the planning process on needed demonstration activities and how research findings—principally those concerned with the administrative feasibility of various service practices—should be incorporated in demonstrations. As with the bureau's Health Services Improvement Branch, formal participation in elaborate planning processes is limited because of budgetary constraints. Although the Health Services Quality Branch has responsibility for MCHS projects, staff attention is primarily devoted to other programmatic responsibilities.

In addition to these components of the planning process for MCHS research activities, in 1974 the agency sponsored two national conferences on research in maternal and child health, bringing together researchers who were involved in research on selected aspects of maternal and child health. These conferences, though somewhat useful to MCHS staff in establishing research priorities, were most advantageous in generally stimulating research interest in MCHS programs. Because decreasing budgets and staff cuts have limited R&D planning activities, it appears that for the most part the agency relies on individual investigators to define the topics to be researched.

Grant applications are initially screened and reviewed by agency staff. Inappropriate or poorly designed applications are returned to applicants. Those applications receiving initial approval are then routed to appropriate HEW regional offices for comment and informal review. MCHS is the only agency in the Study Project's sample to routinely solicit the responses and recommendations of regional officials concerning the selection of particular research projects. The comments generated from both the internal staff reviews and the regional office reviewers are turned over to a technical review committee charged with evaluating applications on the basis of scientific merit. Criteria and guidelines for scientific review are only loosely specified by the agency. Each application is assigned to three committee members for comment and numerical rating. Under special circumstances, additional outside comments are also solicited. Technical review committee recommendations and ratings are returned to agency staff for additional comments and policy relevance review and then forwarded to the associate bureau director for final approval.

Technical review committees are generally composed of 10 professionals outside the federal government representing a variety of biomedical and social science disciplines. In an effort several years ago to ensure the relevance of agency-supported R&D activities to the needs and concerns of MCHS service consumers, the membership of the technical review committees also included three lay consumers. Although the intentions underlying this policy were sound, in practice the procedure was not satisfactory. Difficulties inevitably arose in selecting "appropriate" consumers. In addition, once appointed to the committees, these individuals were generally not qualified to comment on the scientific merit of applications, nor were they particularly helpful as representatives of service consumption. Each lay member brought his or her special concerns for service need and service delivery to the committee but was generally unable to represent broader interests adequately.

MCHS supports a variety of types of research performers, although university-based investigators are the dominant recipients of research awards. According to data collected by the Social Research Group,

$3.6 million (68 percent) of fiscal 1976 expenditures supported researchers in academic environments. Approximately $1.4 million (26 percent) of R&D funds went to private for-profit and not-for-profit organizations, while only $0.3 million, or just under 6 percent of the agency's total R&D allocations, went to governmental organizations, primarily state and local agencies.

DISSEMINATION AND USER INVOLVEMENT

Applicants for research grants are not required to submit plans for dissemination of research results. Research findings are disseminated through state MCHS centers and crippled children's centers, which routinely receive abstracts of research findings from MCHS in Washington. Community conferences also provide conduits for research results, and individual investigators are of course at liberty to publish in journals and textbooks. In contrast to some of the other agencies the Study Project surveyed, MCHS staff members seem genuinely interested in ensuring that agency programs benefit from the results of agency-supported R&D activities. However, reductions in agency appropriations and staff have restricted dissemination capabilities. Again, the severe cuts that have plagued MCHS since the late 1960s and threatened its existence have caused limitations not only in its capacity to provide maternal and child health services but also in its capacity to plan and encourage the use of research findings effectively and innovatively.

NATIONAL INSTITUTE OF MENTAL HEALTH

THE LEVEL AND CONTENT OF SOCIAL R&D

In the National Institute of Mental Health (NIMH), R&D on early childhood is supported in four divisions: the Division of Extramural Research Programs, the Division of Mental Health Service Programs, the Division of Intramural Research, and the Division of Special Mental Health Programs.

The Division of Extramural Research Programs primarily supports investigator-initiated, knowledge production activities, including studies of psychological aspects of behavior, childhood psychoses, social and cultural correlates of behavior, and family structure. Roughly 50 percent of the projects are classified as biological and biomedical and 50 percent as psychological and sociocultural.

The Mental Health Study Center in the Division of Mental Health

Service Programs established a National Center for Clinical Infant Programs during fiscal 1976. The primary purpose of this new program, which became operational in fiscal 1977, is to provide a communication network for outstanding clinical programs directed to vulnerable infants and their families.

The Developmental Psychology Laboratory in the Division of Intramural Research conducts investigations of affective and social aspects of development and child behavior.

The Division of Special Mental Health Programs is the center for NIMH extramural research related to specific social problems. In the childhood area, the division primarily supports applied research in school mental health, juvenile delinquency, and family relationships. This division has two types of centers: total centers administer grants for comprehensive programs of research, training, and services aimed at critical national needs (e.g., the Center for Studies of Crime and Delinquency, the Center for the Studies of Metropolitan Problems); coordinating centers have no granting authority but serve to highlight NIMH interest in particular problem areas having special need for study by linking ideas for R&D initiatives to resources in other locations within the institute (e.g., the Center for Studies of Child and Family Mental Health, the Coordinating Center on Aging). The Center for Studies of Child and Family Mental Health is authorized to coordinate child-related activities in the institute, to sponsor conferences, workshops, and special interest meetings, to analyze recent developments in child development research, to recommend programs and projects for institute support, and generally to promote interest in research related to children.

Until January 1976, the focal point for institute research on early childhood was tucked away in the Center for Studies of Child and Family Mental Health. At that time an assistant director for children and youth was appointed to coordinate and encourage NIMH R&D activities related to children and to stimulate communication concerning child-related research issues through consultation with experts outside the institute and the sponsorship of special conferences, committees, working groups, etc. devoted to particular child-focused concerns.

Approximately 90 percent of NIMH extramural R&D activity is supported by research grants. Most research grant applications are investigator initiated, although divisions supporting extramural research occasionally issue broad program solicitations in specific priority areas (e.g., child mental health). NIMH has no formal research contracting authority. Nevertheless, approximately 10 percent of the institute's total research expenditures support contracts for evaluations, surveys, and some dissemination activities. Contracts are supported from the direct operations budgets of the divisions and a 1-percent evaluation research set-aside.

In fiscal 1976, the largest portion of NIMH resources supported basic and some applied research activities, 90.7 percent of its total R&D expenditures. Approximately 4.6 percent was allocated to demonstrations. Only 3.3 percent of total R&D expenditures supported dissemination activities, and 1.4 percent supported evaluation studies.

The greatest concentration of NIMH expenditures for research related to children is for projects that focus on the kindergarten to grade 4 age-group (5–9 years). According to data collected by the Social Research Group, approximately $7.7 million was allocated for 203 projects in fiscal 1976. Attention in terms of expenditures and number of projects was relatively evenly divided between children in the infant-toddler group (0–3 years), approximately $4.3 million for 119 projects, and the preschool group (3-5 years), approximately $4.6 million for 120 projects.

A substantial portion of NIMH expenditures in fiscal 1976 was for R&D related to all children, including those whose cognitive, physical, and emotional development is considered normal—approximately $9.1 million, according to the Social Research Group. The majority of agency R&D expenditures related to children, however, supported research on children with special characteristics and handicaps—approximately $19.0 million in fiscal 1976.

THE PLANNING AND MANAGEMENT OF SOCIAL R&D

Research planning at NIMH generally tends to be a flexible, decentralized process. Decisions concerning the establishment of research priorities and the allocation of research funds are made at the center and branch levels. Although the assistant director for children and youth, the Advisory Council for Children and Youth, and the Center for Studies of Child and Family Mental Health are all consulted and frequently make suggestions concerning the support for particular R&D initiatives, actual decision making resides in the centers and branches that control the research funds. Within the Division of Mental Health Service Programs and the Division of Special Mental Health Programs, which largely support applied R&D efforts, division directors rarely overrule decisions that have been made by center and branch chiefs. Their role is to facilitate the decisions made by their staffs. In the Division of Extramural Research Programs, which supports more basic research, planning and allocation decisions tend to follow the interests of scientific experts outside the agency. The bulk of research supported in this division results from investigator-initiated applications. Priorities are only informally and loosely specified.

The institute director rarely becomes involved in decisions concerning specific projects. The role of the assistant director for children and youth, who resides in the Office of the Director, is to facilitate, coordinate, and encourage interests among the branches and centers in supporting R&D related to particular children's concerns. He is far less likely to deliver commands from the front office than to exercise powers of persuasion in a low-key way.

There are four basic sources of input to branch and center research planning. The degree of influence of these sources varies among individual units.

- The initial review group: Members of the branch's and center's peer review groups, representing a range of academic disciplines, actively participate in setting research priorities. They work closely with program staff, providing information about current research developments, trends, and gaps and suggesting promising directions for future research investments.
- The professional research and practitioner communities and institute grantees: Center and branch staff members circulate in the research and practitioner communities, attending professional association conferences, presenting seminars, and visiting prospective grantees. These contacts outside the institute provide information about practitioner problems and concerns and research information needs.
- Solicited advice: During the course of a year, mailings that include descriptions of NIMH research programs and current project listings are sent to a variety of federal, state, and local decision makers and program administrators as well as researchers, among them seasoned grantees and recent postdoctoral students, soliciting opinions concerning specific areas of research need and/or promise. This activity is primarily conducted by units supporting applied research.
- Division, staff office, and institute director recommendations: This input is generally less academic and may reflect a broad range of constituent interests. The institute director's comments and the suggestions of the assistant director for children and youth concerning research priorities (e.g., child mental health) may be more or less influential, depending on the level of branch or center staff interest and commitment to a particular course of action. These individuals tend to be more influential in the early planning stages.

Overall coordination of institute research planning is the responsibility of the institute director. Division directors and branch and center chiefs participate in the annual planning process by submitting estimates of needed resources to support projected research priorities. Typically, 75 percent of these requests are for funding of project continuations and renewals. In addition to the annual planning process, the institute conducts a five-year forward planning process to block out major areas of research interest and need for the future.

The NIH Division of Research Grants receives all NIMH grant applications. The grants referral officer for the Alcohol, Drug Abuse, and Mental Health Administration routes the applications to the appropriate institute. Once received by NIMH, applications are assigned to the relevant institute division and a corresponding initial review group. These peer review groups, composed of 12 scientists outside the federal government, have primary responsibility for evaluating applications for scientific merit. In contrast to the NIH study sections, the initial review groups are closely aligned with their divisions and the branches and centers. Group members work closely with program staff, not only in the selection of grant recipients but also in determining research priorities, identifying research trends and gaps, and establishing links between the program staff and the extramural research community.

The initial review groups meet 3 times annually, during 3-day sessions, to review between 25 and 40 applications. Executive secretaries assign primary and secondary readers to prepare written reviews that are read aloud at these meetings. Applications are approved, disapproved, or deferred by a simple majority vote. Approved applications are scored by secret ballot on a scale from one to five and then transmitted to the National Advisory Mental Health Council for a policy-related final review. Council-approved proposals are routinely signed by the institute director and returned to the divisions for final award.

Essentially, project award decisions are made at the branch and center level. The priority scores assigned by the initial review groups serve as guidelines for project award, but final determination of funding is routinely made by branch and center staff. If a project is to be funded out of order—moved out of the order established by the initial review group's numerical ranking—a letter explaining reasons for the change is sent to the division director and to the institute director.

The vast majority of NIMH-supported research projects are performed by academic investigators. Researchers in university-based departments and medical schools received approximately two-thirds of all institute awards in fiscal 1976, according to data collected by the Social Research Group. Approximately one-third of all projects were performed by researchers in for-profit and not-for-profit organizations, with only a small percentage going to government organizations, including state and local agencies.

DISSEMINATION AND USER INVOLVEMENT

The 1975 Research Task Force report on research information and utilization stated that NIMH lacked an "institute-wide policy on which to base a purposeful, coordinated, and planned effort to make research findings known, and whenever appropriate to encourage their use (Alcohol, Drug Abuse, and Mental Health Administration 1975, p. 396). From the Study Project's examination, it seems that those divisions of the institute that support child-related research in both extramural and intramural programs foster a generally passive attitude concerning dissemination. As one staff member noted, "Put it in the literature and pray!" Following the traditional academic pattern in which researchers assume responsibility for publishing their own findings, those branches and centers that primarily support knowledge-production activities have played the least active role in disseminating research results. This trend has been particularly pronounced for intramural studies.

At the urging of the NIMH Division of Scientific and Technical Information, each of the three major divisions having extramural research programs is now moving toward a more active dissemination role; this is particularly true of those branches and centers that support service- or practice-oriented studies. Recently the Division of Extramural Research Programs received approval to publish guidelines for final reports requiring investigators to complete standardized forms that describe project objectives, methodologies, conclusions, and other "serendipitous findings." The Center for Studies of Crime and Delinquency in the Division of Special Mental Health Programs has initiated a monograph series designed to make results of research more accessible to potential users. The Mental Health Services Development Branch in the Division of Mental Health Service Programs requires grantees to design a dissemination plan for project results as a condition for funding. In addition, the division publishes two magazines, *Innovations* and *Evaluation*, which present the results of research supported by the division. These efforts seem to be a particularly promising approach for making new information available to potential users.

BUREAU OF EDUCATION FOR THE HANDICAPPED

THE LEVEL AND CONTENT OF SOCIAL R&D

The mission of the Bureau of Education for the Handicapped (BEH) is to ensure that all handicapped children receive the educational services they need in order to develop to their fullest potential and reduce their degree of dependence. The bureau is responsible for administering approximately half of all federal funds identified for education of the handicapped (Kakalik, Brewer, *et al.* 1974). The agency has operational responsibility for five major programs of activities:

- The *State Grant Program*, in which grants are made to the states to assist in the initiation, expansion, and improvement of programs and projects for education of handicapped children at the preschool, elementary school, and secondary school levels;
- *Special Target Programs*, which include four programs: (1) Deaf-blind centers: Grants are made for model centers to provide diagnostic, educational, and related services to deaf and blind children; (2) Early childhood projects: Model centers are supported to provide educational, diagnostic, and consultative services for preschool handicapped children and their parents and to stimulate the development of additional services to these children; (3) Specific learning disabilities: Grants are made to operate centers for research, personnel training, and services for preschool and school-age children with specific learning disabilities; (4) Regional resource centers: Grants or contracts are awarded for the establishment and operation of regional centers to develop and apply the methods of appraising the special educational needs of handicapped children.
- *Technology and Communication*: Contracts are made for the acquisition, captioning, production, and distribution of films and other educational media; funds are also provided to support the National Educational Media Center for Handicapped Children.
- *Special Education and Manpower Development*: Grants are awarded to support training of teachers, supervisors, researchers, and other professional and other personnel in fields related to the education of the handicapped.
- *Innovation and Development*: Grants and contracts are awarded for the development of new curricular materials, teaching techniques, and other research and demonstration projects; funds are also provided for the support of four R&D centers.

Early childhood research for education of the handicapped is supported in the Research Projects Branch and the Program Development Branch in the Division of Innovation and Development. Research goals include improving procedures for the early identification of children at risk, determining ways to make preschool services more appropriate to the unique needs of handicapped children, and disseminating valid identification, assessment, and intervention information to those who are responsible for the establishment and maintenance of service delivery systems. The Research Projects Branch funds early childhood research in eight areas: (1) orthopedically and other health-impaired children, (2) emotionally disturbed children, (3) hearing-impaired children, (4) mentally retarded children, (5) speech-impaired children, (6) visually handicapped children, (7) child advocacy, and (8) an assortment of non-categorical projects. These projects include state-of-the-art and assessment studies as well as support for four multidisciplinary R&D centers that conduct research on specific areas of interest, e.g., teacher preparation and curriculum development. In order to stimulate more effective programming for handicapped children, BEH has structured its R&D program to link research and research-related activities directly to the support of special education services.

In addition, the Program Development Branch administers the more than 150 demonstration projects of the Handicapped Children's Early Education Program, authorized by the Handicapped Children's Early Education Assistance Act of 1968. All projects in this program are initially funded for three years and are required to develop an experimental model for replication. Successful models receive additional funding in an outreach stage: services at the original project site are continued and replicated in several other locations. In order to receive continued support from BEH, each outreach project is required to have a supplemental funding source ready to assume support for the services when federal funds are phased out.

R&D activities in BEH are entirely extramural and were previously supported primarily by grants, although there has been a significant increase in the use of contracts since fiscal 1974. Contracts are frequently awarded for evaluation studies, state-of-the-art studies, literature reviews, some development projects, and the four R&D centers. In 1973, the Office of Education initiated an agency-wide grant and contracts reform. Agency research staff critical of the reform argued that it was designed to force agencies away from the grant concept toward more-detailed specification of research needs culminating in procurement contract. In May 1974 the *Grants Administration Manual* was revised to include the following controversial clause (Chapter 1-10, p. 1):

> The general policy is, in all cases defined as procurements or having substantial elements of procurement, to require the use of contracts under the Federal Procurement Regulations whenever feasible. . . . There will be less of a management inclination to approve grants with procurement features although it is recognized that exceptions need to and will be made.

Agency research managers were at once puzzled and angered by the revision. How were they to determine what constituted "substantial elements of procurement"? And why were they being shoved in this direction? In response to the revision, the chief of the BEH Research Projects Branch wrote a memo to the director of grants and procurements in the Office of the Secretary discussing problems inherent in a major shift to contract support for research. The final paragraph underscores the frustration of the BEH research manager:

> Thus we reach an impasse, which reduces our capability to proceed with activities in four areas which have been identified as highly important in terms of our mission of improving educational opportunities for the handicapped. We cannot continue to permit narrow interpretations of *procedures* to dictate *policy*. This can only result in a diminution of our credibility with our constituency and with the Congress, and a reduced impact on the solution of the handicapped.

In fiscal 1976, the ratio of directed (contract) research to field-initiated (grant) research is roughly fifty-fifty. Directed research is typically solicited through staff-developed RFPS, although more-narrowly-targeted grant solicitations appear to be gaining administrative favor.

The largest portion of BEH R&D resources supported demonstration activities in fiscal 1976, approximately 71 percent of its total R&D expenditures. Approximately 14 percent supported basic and applied research activities. Roughly 1 percent of total R&D expenditures were allocated for evaluation studies, and 14 percent for dissemination and the development of materials.

According to data collected by the Social Research Group, the greatest concentrations of BEH expenditures for child-related R&D were for preschool-age children (3-5 years) and for children from kindergarten to grade 4 (5-9 years). Approximately $19.1 million supported 186 projects that focused on children in the 3-5-year age-group; $19.7 million was allocated to 184 projects directed toward the 5-9-year age-group. Nevertheless, substantial emphasis is given to research and development targeted for children in the infant-toddler group (0-3 years), with $14 million having been expended for 121 projects during fiscal 1976.

As might be expected, all but a small portion of BEH R&D activities are related to children having handicapping conditions or other special characteristics that necessitate special educational supports. According to the Social Research Group, only $0.9 million was expended for research and development related to children whose cognitive, physical, and emotional development is considered normal.

THE PLANNING AND MANAGEMENT OF SOCIAL R&D

BEH research planning[3] is based on three assumptions: (1) practitioners are a primary source for identifying initial needs, (2) research expertise is essential in defining the problems to be addressed by agency-supported research and development, and (3) practitioners and researchers must interact in order to optimize the effects of research.

Typically, most of the research direction takes shape at the branch level, with individual project officers translating the concerns of the extramural research community and operating service administrators into RFPS or clearly specified grant announcements. Planning tends to be handicap-specific and sensitive to pressures exerted by outsiders—researchers, professional service providers, special interests, and Congress. It is the project officers who travel in the research community, attend conferences, make site visits, and maintain the communication channels; therefore it is the project officers who assume primary responsibility for establishing R&D priorities. The role of the bureau commissioner, deputy commissioner, and division heads in the research decision-making process is to sharpen areas of potential research interest, to coordinate staff of the bureau to implement congressional directives, and to provide feedback on suggestions that filter up from the branches.

In fiscal 1975, the bureau undertook a new, more comprehensive formal planning procedure designed to link research activities with bureau objectives. A principal ingredient in this new procedure involved increasing communication with the professional community and the constituency at large. BEH consults a variety of potential users of research results in its research decision-making processes. In early 1975, the bureau sponsored a series of conferences on research needs. Invited participants included representatives from elementary schools, universities, state education agencies, and community groups. In addition, resources were made available for state-of-the-art studies and assessment projects to help identify early childhood research issues and information needs concerning the education of handicapped children. Although the conferences were well planned, well attended, and well received by the participants, they were not particularly useful in helping to formulate specific research priorities. The primary difficulty seems to have been one of synthesis. As one staff member suggested, "A bundle of great ideas, but no way to organize them."

In 1974, in response to continuing pressure from the commissioner of education and administrative offices in the Office of Education to move away from grants toward the procurement contract, the acting director of the Division of Innovation and Planning prepared a statement detailing significant changes in BEH planning objectives. An ambitious set of bureau goals was outlined (e.g., "to assure that by 1977, every handicapped child who leaves school has had career educational training that is relevant to the job market, meaningful to his career aspirations, and realistic to his fullest potential"). There was to be an increase in formal research planning activities based on the objectives, and support for field-initiated studies was to be significantly reduced. The planning statement was a response to what turned out to be a rather short-lived directive focusing on contract research. Nevertheless, under pressure from a variety of sources, a middle-ground position was assumed, and the bureau's research portfolio was modified. In fiscal 1976 about half of agency R&D expenditures supported investigator-initiated projects. The other half supported grants and contracts in response to agency-specified research needs.

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[3] The planning activities described in this section relate to the Research Projects Branch.

The Application Control Center is the central receiving point for all research grant applications to bureaus and divisions in the Office of Education. The center assigns proposals to the appropriate bureaus and divisions. Branch chiefs then distribute the applications among branch staff, who serve as project officers. Review of grant applications as well as of contract proposals is a two-stage procedure: (1) a technical review conducted by project officers, field readers, and a panel of professionals, and (2) an internal administrative review for relevance to agency needs, administrative feasibility, etc.

All applications and proposals are initially screened by project officers for general quality. Clearly inferior or inappropriate applications are rejected at this stage. Project officers then sort remaining applications and proposals according to broad topic area and select from a file two or three field readers outside the federal government with specific relevant expertise. Applications and proposals are mailed to the field readers with instructions to provide comments and to rate them numerically on a scale from one to seven. Completed reviews are returned to BEH.

Having the field reader's recommendations and ratings in hand, a project officer selects five to seven individuals to serve on a professional review panel. These multidisciplinary *ad hoc* panels are composed of academic researchers, school administrators, state and local education agency administrators, and other related professionals. In contrast to the review panels in agencies of the Public Health Service (MCHS, NICHD, and NIMH), BEH review panels evaluate applications and proposals against criteria of relevance as well as for scientific and technical merit.

Project officers lead the panel meetings. They assign a first and a second reader for each application or proposal; the readers in turn prepare written comments. The panel review process tends to be quite informal; decisions are made by consensus, rather than in accordance with strict rules.

After the panel meetings, project officers review the applications and accumulated comments in order to reconcile panel recommendations with field reader rankings. The personal preferences and biases of the project officer usually weigh heavily on the selection of applications and proposals to be presented to the branch chief for approval. When applications and proposals are presented to the branch chief, they are accompanied by the comments and recommendations of the outside readers and panels. The final responsibility to recommend award, however, rests with the project officer rather than outside reviewers. The project officer's recommendations for award are generally approved by the branch chief. Only rarely does the branch chief exercise a veto. Applications and proposals from each branch are then presented to the Bureau Policy Advisory Group, composed of the commissioner of education, the deputy commissioner for education of the handicapped, division directors, and branch chiefs, for administrative review and approval. Generally, between 50 and 60 applications and proposals are reviewed in a funding cycle. Final award decisions are the responsibility of the deputy commissioner. This final administrative review affords an opportunity to acquaint top-level bureau staff with the research portfolio.

Approximately 42 percent of BEH R&D projects related to children are performed by government organizations, primarily state education agencies and local education agencies. Of the Study Project's sample of six agencies, BEH supports the largest number of government organization performers. According to data collected by the Social Research Group, $17 million was awarded to state and municipal agency investigators in fiscal 1976. Roughly $14.3 million was awarded to university-based researchers, and only about $9.7 million supported projects being conducted by for-profit and not-for-profit research organizations.

DISSEMINATION AND USER INVOLVEMENT

Dissemination procedures vary according to the type of research supported. Most project final reports are sent to the Educational Resources Information Center and the Technical Assistance Development System. Research findings are also made available through a recently organized nationwide network of regional resource centers. BEH has consistently supported research synthesis projects and state-of-the-art assessments.

Grant applicants for the demonstration projects of the Handicapped Children's Early Education Program are required to submit plans for dissemination and replication of the exemplary aspects of individual projects. Applicants are requested to submit a plan identifying specific elements of parent-family participation, dissemination techniques, replication activities, and proposed coordination with other agencies and supplementary services. Approval of these dissemination plans is a necessary condition of funding.

A recent Rand report on services to handicapped children (Kakalik, Brewer, *et al.*, 1974) cited a lack of available information concerning effective programs and service delivery methods as a major problem for the administrators of state and local programs providing educational services for handicapped children. Though BEH staff members have expressed strong intentions to support dissemination efforts actively, the agency seems to fall short in this area. More systematic measures are needed to ensure that information obtained from research and demonstration projects is made available to potential users, particularly state and local service administrators.

AN ASSESSMENT

THE LEVEL AND CONTENT OF SOCIAL R&D

According to the Study Project's estimates, $379.5 million was expended in support of the whole range of R&D activities on early childhood in fiscal 1976. Of that amount, 65.8 percent was directly related to ongoing service programs; 34.2 percent was authorized for R&D activities intended to lead to the formation of social policies for young children, to contribute to the definition of social problems related to them, or to advance the state of fundamental understanding of the development of children age 0–9 years. Of the total, approximately 36.5 percent of expenditures was for projects of basic and applied research on child development, while 48.8 percent was for demonstration activities. Only 6.5 percent was for program evaluations, and 8.2 percent for the several types of utilization activities. Therefore, the greatest federal investment in social R&D for young children is for activities in basic research and demonstrations.

The six agencies included in this study account for approximately one-half of the total projects and approximately $130 million, or 34.2 percent, of total expenditures of early childhood R&D activities. Because of the criteria used to select these agencies, it is inappropriate to analyze expenditures for this subset according to type of R&D activity. It is interesting to note, however, that within this sample of agencies, 90 percent of the demonstrations were supported by the Office of Child Development, the Social and Rehabilitation Service, and BEH, agencies having administrative responsibility for operating service programs for specifically targeted groups of children. Approximately 40 percent of basic and applied research projects were supported by NIMH and NICHD, agencies that have primary responsibility for the support and management of programs of basic research.

As might be expected, the service-oriented agencies (OCD, SRS, MCHS, and BEH) for the handicapped support more evaluation research than the knowledge-oriented agencies (NIMH and NICHD). Research support and utilization activities receive consistently weak support across all the agencies examined by the Study Project. None of the sample agencies has an integrated central policy on which to base a purposeful, coordinated dissemination effort, although some of the agencies devote more staff and financial resources for these purposes than others. This low level of support and lack of policy reflects a general attitude toward research dissemination activities: Agency research and management staff at best view dissemination activities as having a lower priority and at worst as neither an important nor a proper part of agency research responsibility.

Grants are the dominant funding mechanism among the agencies. Approximately 85 percent of the projects, representing 71 percent of the total R&D expenditures of these six agencies, are supported by grants. Contracts account for 13 percent of the total number of projects and 29 percent of the total R&D expenditures of these agencies are generally used to support evaluations (OCD, NIMH), state-of-the-art studies and literature reviews (BEH, NIMH), and routine procurement (NICHD).

The bulk of early childhood R&D activities supported by these six agencies is conducted extramurally. Only the two knowledge-oriented agencies (NIMH and NICHD) have intramural research capabilities, and these represent very small levels of effort, approximately 0.3 percent of total federal expenditures.

Within the age-group we have defined as early childhood (0–9 years), the spread of R&D activities is relatively even across three subgroups among the agencies in our sample: infant-toddler, preschool, and kindergarten to grade 4. MCHS and NICHD tend to concentrate the bulk of their attention on children in the infant-toddler group (0–3). BEH devoted relatively more resources to preschool-age children (3–5 years) and to children from kindergarten to grade 4 (5–9 years). ORD, NIMH,

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and SRS distribute their child-related R&D resources rather evenly across these three categories.

Analyzing agency R&D expenditures according to whether they are directed to children having special characteristics or to all children, including those whose cognitive, physical, and emotional development is considered normal, the Study Project has found that, within the sample agencies, the bulk of projects and resources is devoted to children with special characteristics. The larger category of special characteristics can be divided into two major subcategories: handicapping conditions, including a range of physical and intellectual handicaps; and other special characteristics, including children at risk, physically ill, emotionally disturbed, and abused or neglected children.

Distribution of R&D activities supported in the subcategory of handicapping conditions is slightly weighted toward physical handicaps over intellectual handicaps. NIMH research in the handicap area focuses largely on physical handicaps related to neurological conditions. NICHD research in this area concentrates on communicative disorders and neurological problems. BEH supports a wide variety of research related to physical handicaps, including projects on aural, visual, orthopedic, and communicative handicaps. Research related to intellectual handicaps is concentrated in NICHD and BEH, focusing on mental retardation and learning disabilities.

Abused or neglected children are a major focus of the other subcategory of special characteristics. The bulk of this research and development is funded by OCD. Research and development focusing on children with emotional handicaps accounts for roughly one-third of the activities in this subcategory, most of it supported by NIMH and BEH. All agencies support some research and development on children at risk.

We therefore conclude that federally supported social research and development related to early childhood is largely directed to children having special characteristics and special needs, not to all children. Furthermore, from our study of six agencies it seems clear that federally supported early childhood R&D focuses on particular characteristics and particular needs in isolation—apart from other characteristics and needs. R&D funding is categorical. Support for research is generally related to legislated service programs, and agency jurisdictions over research and development are therefore largely defined by their service program responsibilities. For example, OCD conducts research and development on child abuse and neglect, foster care and adoption, etc., while SRS conducts R&D related to the delivery of health services to poor children and BEH supports studies related to the educational needs of children with physical and mental handicaps. There is little duplication or overlap of R&D efforts among the service-oriented agencies examined. There is also little coordination or support for cross-cutting research endeavors. OCD and BEH have worked in tandem on several R&D projects involving Head Start and handicapped children. However, for the most part, service-oriented agencies are pursuing their own specialized areas of interest and responding to their own discrete sets of imperatives and constituencies. Cross-cutting research and interagency coordination, although given lip service, are rare.

Among knowledge-oriented agencies, the establishment of appropriate R&D jurisdictions is less clear, since programmatic responsibilities cannot serve as guides. Overlap occurs, and interagency rivalry over R&D turf has developed. For example, three agencies in the sample—NICHD, NIMH, and MCHS—support substantial amounts of research on factors affecting children's cognitive, social, and emotional development. This overlap has created two situations. First, because NICHD is a knowledge-oriented agency and MCHS is a service-oriented agency, their relationship appears to be quite complementary. At the request of Congress, an HEW memorandum of understanding detailing the research responsibilities of each agency was developed in 1963 when the research authorities of both agencies were enacted. NICHD was to support primarily fundamental, knowledge-building research, while MCHS was to fund applied research that would be translated for use in state programs. The types of research supported by these agencies, coupled with the dominance of NICHD in the research area, have tended to make this relationship more facilitating than competitive.

The NICHD-NIMH relationship appears to be quite different. Unlike MCHS, NIMH is a powerful knowledge-oriented agency, formerly an institute of NIH. By virtue of its reputation in the research community and its strength in the bureaucratic structure, NIMH is not so quick to yield the basic research territory that the institutes hold in common. There is competition for research projects set against a background of long-standing interagency rivalry. A report to the director of NICHD issued in November 1974 states (National Institute of Child Health and Human Development 1974, p. 6):

> There is widespread dissatisfaction with the decisions made by the DRG (Division of Research Grants, NIH) on grant assignments to the Institutes. In most cases, it is felt that many grants which, in the opinion of our staff, should be assigned to the NICHD are assigned instead to the National Institute of Mental Health. There can be no doubt that a real conflict between NICHD and NIMH exists in this area.

Among these two knowledge-oriented agencies, there are no incentives to coordinate; therefore, overlapping research interests have created more competition than cooperation.

From the study, it also seems clear that federally supported early childhood R&D is generally focused on children's special characteristics and needs apart from the context of the family. In fiscal 1976 federal support for family-oriented research was uniformly low across the six agencies examined. This finding is supported by data from the Social Research Group, which suggests that family research accounts for only 4 percent of the total R&D expenditures and 6 percent of the projects among these agencies. Despite the advocacy of influential members of the research community, sustained programs of family study have not developed. There are several possible explanations. In part, the low level of support for research in this area may be due to the traditional federal reluctance to invade the privacy of the family. In President Nixon's 1969 statement introducing his administration's new initiatives on behalf of children, he was careful to also state that "the sacred rights of parents" and the privacy and integrity of the family should be protected.

A second explanation may be that family-oriented policy, and therefore family-oriented R&D, has no clearly defined parameters or constituents. The definition of the family is nebulous—one or more adults caring for one or more children. There are endless possibilities for family formation. Yet what about childless adults living together? Are they not also families? There is no identifiable constituency because everyone is a constituent. With the exception of the Child and Family Services Act, which was defeated, Congress has shown little interest in families. This lack of interest has caused a lack of available R&D resources to support comprehensive programs of research on the family. As Urie Bronfenbrenner of Cornell University noted in testimony before the Senate Subcommittee on Children and Youth in 1973 (U.S. Congress 1973, p. 134):

> . . . [T]wo years ago, at the first hearings conducted by this Sub-committee, I presented evidence of what I viewed as a disturbing trend in the position and prospects of the American family and its children. I then went on to speak with some optimism of policies and programs—some already in force, others clearly on the horizon—which could counteract the trend, and perhaps even reverse it.
>
> I appear before you today a more sober man. The disturbing trend to which I called to the Committee's attention has increased, and so has the evidence for its course and its consequences. But I claim poor credit as a prophet, for the policies and programs that I saw on the horizon have turned out to be not a rising sun, but a falling star, barely perceptible by its now cold, reflected light.

THE PLANNING AND MANAGEMENT OF SOCIAL R&D

An overwhelming conclusion of this study of six federal agencies supporting early childhood R&D is that the management of R&D related to children is not uniform across agencies. There are no standardized procedures for setting research priorities, for determining levels of support, or for the identification and selection of investigators. Moreover, management styles vary not only among agencies, but among individual research managers within agencies.

Among the agencies examined, planning processes varied greatly. Research managers, responsible for establishing research priorities and defining the problems or areas of interest to receive research support, are influenced by a variety of factors, including bureaucratic conditions, special interests, legislative pressures, and budget constraints. In some agencies planning is highly centralized; in others it is decentralized. This seems to be more the result of managerial style than of the type of research being supported or the particular agency mission. For example, NICHD and NIMH are both knowledge-oriented agencies; neither has categorical service responsibilities. Yet in NICHD, planning is centralized in the Office of the Director. The director is a dominant force in the agency, and planning seems to be a top-down process. At NIMH, on the other hand, planning responsibilities are decentralized, with the staff of each of the branches and centers having a great deal of autonomy to set priorities according to their own interests and the interests of their constituents, who are generally researchers.

A significant conclusion concerning the planning process that can be drawn from our study relates to the types of special interests that have influence. As might be expected, among the service-oriented agencies, including OCD, SRS, MCHS, and BEH, which have clearly defined missions and target populations, the interests of service providers and professional groups seem to be more influential than the interests of the academic research community. Specific management styles vary among the service-oriented agencies, though there is an observable pattern of agency staff assuming an active role in planning and performer selection. OCD has perhaps adopted the most clearly specified approach to planning with the development and use of the Office of Human Development planning guidance materials. BEH, although less directed, also depends heavily on agency research staff to establish priorities and determine future directions for R&D investment.

Among the knowledge-oriented agencies, including NIMH and NICHD, the interests and advice of researcher constituencies generally carry more weight. Both agencies continue to be influenced by the traditional philosophy of NIH, which maintains that the best insights into the most researchable problems come from research scientists, not federal research program managers. Although there is evidence that this pattern is beginning to change, the dominance of the investigator-initiated grant and the inference of peer review panels (NICHD study sections and NIMH initial review groups) results in the relinquishing of most research planning and problem definition to scientists outside government.

Budget constraints and excesses are also important factors in planning. Agencies, such as MCHS and SRS, lacking the strong support of influential constituencies and plagued by sharp budget cuts of R&D resources that are diminishing by attrition, tend to be reluctant to undertake new research initiatives. Among research managers in these agencies, "dig in to fend off the onslaught" seems to be a prevalent attitude. Agencies in the Study Project survey having strong constituent support and having received windfall increases in their appropriations or relatively steady gains in their budgets tend to be more innovative and receptive to new research initiatives. For example, research managers in BEH, which has had steadily increasing appropriations since its establishment, have shown themselves to be receptive to a variety of new research approaches to exploring a variety of new avenues of study. Because their pocketbooks are less constrained, their attitudes are also less constrained.

Decisions concerning R&D resource allocation are primarily made by agency top-level administrative staff, with varying degrees of input from R&D and program staff. All the agencies appear to be more actively pursuing relationships and strengthening ties with Congress.

As evidenced by the movement toward the use of contracts to support R&D in HEW, most notably in the Office of Education, there is a trend to increase accountability for research expenditures in the face of general federal belt-tightening. Across the agencies surveyed, research and program staff are encouraged to develop capacities for conceptualizing future R&D needs and specifying current gaps. When program offices can clearly define research needs, the contract is often recommended as the appropriate mechanism of support. When research needs or gaps cannot be specified by offices of programs or research, the grant is the clear preference of both agency staff and researchers.

As discussed above, interagency coordination and cooperation in joint research planning ventures are rare occurrences. The Interagency Panel for Research on Early Childhood represents a movement in this direction. The panel holds regular monthly meetings of agency representatives and strives to stimulate coordination by identifying areas of intersecting R&D interest as well as potential gaps or duplications in research investment. The panel represents an important effort; however, its influence has not been substantial. Although all the participating agencies surveyed endorsed the concept of the interagency panel, the panel has not enjoyed much clout.

The identification and selection of performers also varied greatly among the six agencies sampled, largely as a function of the entrepreneurship of individual research managers. As with planning processes, however, in service-oriented agencies the recommendations of agency research staff are generally more influential than those of outside reviewers. In knowledge-oriented agencies the identification and selection of performers is dominated by scientists outside government. In service-oriented agencies in which information needs can usually be more clearly specified, RFPS and program announcements are issued to identify potential investigators. In knowledge-oriented agencies, although there has been a movement toward issuing program announcements, there is a greater reliance on investigator-initiated applications and proposals.

In the six agencies examined, about half of the total projects and half of the total funds support academic performers. The majority of the projects performed by academic organizations are conducted in university-affiliated medical schools (projects supported by MCHS, NIMH, and NICHD), with graduate schools of education and other graduate professional schools[4] accounting for approximately one-third of the total projects and funds. Although several universities—Stanford University, the University of California at Los Angeles, Harvard University, the University of Minnesota, and the University of Illinois—attract more support, performer data display a generally broad representation. No small group of universities has dominated the bulk of federally supported early childhood research.

For-profit and not-for-profit firms receive roughly one-third of the total expenditures and account for one-third of the projects. Approximately 75 percent of the organizations receiving early childhood research funds are not-for-profit organizations. OCD utilizes for-profit firms more than any other sample agency, with one-quarter of its organization support going to for-profit organizations.

About one-fifth of the total projects and expenditures support government conduct of early childhood research (i.e., state and local government and education agencies). BEH supports the largest number of government agency performers, with 70 percent of its government performer dollars directed to state education agencies and 25 percent to local education agencies. A little more than half of the OCD government organization support is at the state level, supporting state R&D capacity building projects.

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[4] Information on specific departments of disciplines in the graduate professional schools was not available.

DISSEMINATION AND USER INVOLVEMENT

Each of the six agencies surveyed involves potential users of research in decisions concerning planning and performer selection. In the knowledge-oriented agencies, NICHD and NIMH, the research scientist outside government is the primary user of institute-supported research. Peer scientists, who serve on institute study sections and initial review groups, are the dominant influence in performer selection and exercise varying degrees of influence in research planning, through both formal and informal interaction with agency staff. In addition, the national advisory councils of the institutes represent efforts to expand the horizon of research decision making beyond professional scientific interests by including among their members nonscientific lay consumers. It is important to note, however, that this practice of including nonscientific consumers has met with varying degrees of success. In NICHD, the narrow, personalized perspectives of these individuals was frequently as detrimental in providing intellectual currency as it was helpful in maintaining a concern for relevance.

It is more difficult to isolate a specific set of users of the research supported in the service-oriented agencies, although providers of services to children across the country—professionals associated with the variety of state and local agencies that administer child health, Head Start, day-care, foster care, and child abuse services as well as those who provide special educational services for handicapped children—are the primary audience for most of the research supported by these agencies. BEH, OCD, and MCHS involve professional users in research planning primarily through support of research conferences and seminars designed to bring together federal research and program staff with users and providers in the field. Professional users are also involved in performer selection, although attempts to include nonscientific consumers on review panels have been generally unsuccessful.

As with other factors affecting R&D management in the sample of six federal agencies that support early childhood research, the degree of user input in decision making is dependent on the style of individual research managers.

Dissemination of the results of federally supported early-childhood R&D is generally given lower priority than other management functions among the agencies in the sample. There is some evidence to suggest that agencies are making more of an effort to become actively involved in dissemination, with such measures as the policy implication papers at OCD, outreach activities at BEH, and an increasing budget for dissemination activities at NIMH. For the most part, however, dissemination activities are usually limited to individual, project-by-project efforts. None of the agencies studied supports an integrated, central policy on which to base a coordinated dissemination effort. In the knowledge-oriented agencies, the responsibility for dissemination of fundamental research has traditionally rested with the investigator. Professional journals and other disciplinary channels exist for attracting the attention of the other researchers. Among the service-oriented agencies, dissemination appears to be more of a problem, although efforts to make service professionals and other potential users aware of the results of federally supported R&D seem to be increasing. The establishment of information systems (such as the Educational Resources Information Center and Medlar) is evidence, as is the routine preparation and distribution of project abstracts by MCHS and the demonstration site visits that are encouraged by BEH. Nevertheless, in general the extent and effectiveness of dissemination efforts among the agencies in our sample falls well short of what is both desirable and needed.

CONCLUSION

It is difficult to assess the efficacy of the different R&D management styles used by these agencies that support early childhood research and development activities and just as difficult to discern any major differences in the quality of usefulness of the R&D as a result of these various methods of management. What can be stated with a certain amount of confidence is this: R&D decision making is an extraordinarily complex process, more often determined by the subtleties of personalities and public opinion than by formalized management techniques. Sybil Escalona of Yeshiva University observed in 1975:[5]

> In general, public opinion and social policy determine priorities among research areas. Program development is not usually based on research results. That is, very seldom are research results "translated" into either social practices or public policy. This state of affairs appears to me to be the natural consequence of an open society and not necessarily an evil. Research results do affect social practice and public policy whenever research and common observation demonstrate that currently accepted practices are detrimental to the well-being of young children, or fail in their purpose in some other way. Thus there is always a considerable

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[5] Letter to Christine L. Davis, 1975.

time lag between the best scientific understanding available at the time, and social practice.

REFERENCES

Alcohol, Drug Abuse, and Mental Health Administration (1975) *Research in the Service of Mental Health: Report of the Research Task Force of the National Institute of Mental Health.* Julius Segal, ed. Alcohol, Drug Abuse, and Mental Health Administration, National Institute of Mental Health, Department of Health, Education, and Welfare. Rockville, Md.: U.S. Department of Health, Education, and Welfare.

General Accounting Office (1978) *Administration for Children, Youth, and Families—Need to Better Use Its Research Results and Clarify Its Role.* GAO report to Congress. Washington, D.C.: U.S. Government Printing Office.

Hayes, Cheryl D. (1980) Toward a conceptualization of the functions of demonstrations. In Donald E. Stokes, ed., *Studies in the Management of Social* R&D*: Selected Issues.* Vol. 4 in Study Project on Social Research and Development. Washington, D.C.: National Academy of Sciences.

Hertz, T., *et al.* (1975) *Toward Interagency Coordination: Fifth Annual Report FY 1975 Federal Research and Development Activities Pertaining to Early Childhood.* Washington, D.C.: Social Research Group, George Washington University.

Kakalik, James S., Brewer, Garry D., *et al.* (1974) *Improving Services to Handicapped Children.* Santa Monica, Cal.: Rand Corp.

Maternal and Child Health Service (1973) *The Maternal and Child Health Service Report: Promoting the Health of Mothers and Children, FY 1973.* Maternal and Child Health Service, Health Services Administration, Department of Health, Education, and Welfare. Rockville, Md.: U.S. Department of Health, Education, and Welfare.

National Institute of Child Health and Human Development (1974) *Research in the Behavioral Sciences: The National Institute of Child Health and Human Development. A Report to the Director.* J. M. Bobbitt and P. H. Sampson. National Institute of Child Health and Human Development, National Institutes of Health, Department of Health, Education, and Welfare. Bethesda, Md.: U.S. Department of Health, Education, and Welfare.

National Research Council (1976) *Toward a National Policy for Children and Families.* Advisory Committee on Child Development, Assembly of Behavioral and Social Sciences. Washington, D.C.: National Academy of Sciences.

National Research Council (1978) *The Federal Investment in Knowledge of Social Problems.* Study Project Report. Study Project on Social Research and Development, Vol. 1. Washington, D.C.: National Academy of Sciences.

Steiner, Gilbert (1976) *The Children's Cause.* Washington, D.C.: Brookings Institution.

U.S. Congress, Senate (1973) Testimony by Urie Bronfenbrenner before the Senate Subcommittee on Children and Youth. September 23, 1975. Washington, D.C.: U.S. Government Printing Office.

White, Sheldon H. (1973) *Federal Programs for Young Children: Review and Recommendations.* Vol. I. Washington, D.C.: The Huron Institution.

5 The Living Environment

JOHN M. SEIDL

INTRODUCTION

OVERVIEW

Changes in settlement patterns—agrarian, urban, and metropolitan—have been an important determinant of governmental action during this century. The magnitude and unpredictability of these changes have called forth varied responses over time. In 1970, for example, the number of persons living in metropolitan areas with populations greater than one million exceeded the entire population in 1900 (Honey 1976). Since 1970, metropolitan areas have grown at a slower rate than the entire population and significantly less than nonmetropolitan areas. This shift represents a major turnabout of growth patterns extending back to the early nineteenth century (Berry and Gillard 1977).

Accompanying movements and growth of population have been shifts in the spatial distribution of economic activity. A massive accumulation of employment opportunities in cities during and after the industrial revolution has recently given way to a pattern of industrial deconcentration within old industrial regions and across regions and dispersion of jobs to lower-income, nonmetropolitan areas.

Government interventions—such as reclamation, navigation, electric power projects, rural electrification, and farm subsidies—have been critical ingredients in shaping development patterns and fostering environmental concerns. Changing methods of farming, often pioneered by Department of Agriculture researchers, reduced rural population and swelled the cities during the first 50 years of this century. In turn, the building of a sprawling interstate highway system in the 1950s and 1960s helped make possible the exodus to the suburbs of manufacturing, wholesaling, and retailing interests and middle-class families.

At the same time, numerous federal initiatives have responded to the adverse consequences of rapid or uneven economic and population change. Creation of the Department of Housing and Urban Development and the Environmental Protection Agency followed a recognition that problems of pollution and urban decay outstripped the capacity of smaller political jurisdictions to control the impacts of externally imposed change. A host of federal programmatic initiatives that address issues concerning the quality of life and the use of natural resources reflects a similar effort to moderate the consequences of settlement patterns and life-style changes.

The policy area that encompasses the patterns of growth and change in agricultural, urban, and metropolitan areas has been defined by the Study Project as "the living environment." The living environment consists of a network of metropolitan regions, industrial towns, smaller settlements, open space, and wilderness. The network is tied together by complex systems of communications and transportation for the movement of messages, people, goods, and services. Settlements in the network vary in size, efficiency, and the quality of life available. National, and increasingly transnational, organizations, both corporate and governmental, permeate life in the settlements and stimulate change both locally and among the elements of the network. Individuals in local areas are also at work shaping the environment.

SOCIAL RESEARCH AND DEVELOPMENT

Table 5-1 attempts to put the social R&D expenditures of the principal living environment agencies in perspective. The figures for total agency social R&D expenditures were developed in an extensive survey undertaken by the Study Project. However, the crispness of the table should not lead one to presume that these are precise figures. The distinction between social R&D and other R&D left considerable room for judgments.

Tables 5-2 and 5-3 give the reader a picture of the general types of social R&D being sponsored in living environment agencies.

The history of social R&D in the five federal agencies principally concerned with the living environment is largely the history of the Department of Agriculture. Congress created the Department of Agriculture on May 15, 1862. Social research in the department began as a by-product of data collection. At the turn of the century, data collection was the main social

TABLE 5-1 Social R&D Obligations of the Living Environment Agencies ($millions)[a]

Agency	Fiscal 1975	Fiscal 1976	Fiscal 1977
Department of Agriculture	263.6	282.4	285.7
Environmental Protection Agency	12.8	12.8	12.8
Department of Housing and Urban Development	53.9	58.0	68.4
Department of the Interior	13.0	13.3	13.3
Department of Transportation	81.4	101.1	110.0
TOTAL	424.7	467.6	490.2

[a] The figures in this table were developed by the Study Project on Social Research and Development. For more detailed information, see Mark A. Abramson (1978) *The Funding of Social Knowledge Production and Application: A Survey of Federal Agencies.* Study Project on Social Research and Development, Vol. 2. Washington, D.C.: National Academy of Sciences.

research activity, but there was growing interest in the economic aspects of agriculture.

Following World War I, farm prices dropped and the need for more problem-oriented social research to stabilize and improve farm income became apparent. In this atmosphere various economic research and data offices were consolidated on July 1, 1922, into the new Bureau of Agricultural Economics (BAE). The bureau was responsible for crop and livestock estimates and farm management, cost, marketing, and regulatory studies. The bureau also supported research on agricultural cooperation, farm population and rural life, and land economics. In 1925 the Purnell Act provided specifically that funds of agricultural experiment stations could be used for economic and social research. Some social research was also undertaken in other quarters, such as the Bureau of Home Economics.

During the Great Depression BAE produced many research-based responses to try to bolster the agricultural economy. As part of its research in support of increased production during World War II, BAE completed a detailed sample survey of rural populations, including social as well as economic data.[1] In 1953 BAE was abolished in an effort to make research

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[1] By-products of the survey completed by bureau researchers included a sociological study of Coahoma County plus postwar plans for production of cotton in Mississippi and other states. The study and the plans so angered some congressional critics that BAE's program planning responsibility was terminated and it returned to its previous narrower role of collecting statistics and producing economic studies.

TABLE 5-2 Social R&D Obligations of the Living Environment Agencies by Policy Area (fiscal 1977, $millions)[a]

		Human Resources				Community Resources							
Agency	Total	Health	Education	Employment and Training	Social Services and Income Security	Economic Growth	Transportation	Housing and Community Development	Law Enforcement and Justice	International Affairs	Natural Resources and Environment	Energy Development and Conservation	Science and Technology Base
Department of Agriculture	285.7	74.7	54.2	—	6.0	44.3	—	20.0	—	9.6	76.9	—	—
Environmental Protection Agency	12.8	—		—	—	—	—	—	—	—	12.8	—	—
Department of Housing and Urban Development	68.4	1.0	—	—	—	—	—	65.4	0.4	—	1.6	—	—
Department of the Interior	13.3	1.2	2.2	0.02	—	1.4	—	0.8	—	—	6.5	1.1	0.08
Department of Transportation	110.0	—	—	—	—	—	110.0	—	—	—	—	—	—
TOTAL	490.2	76.9	56.4	0.02	6.0	45.7	110.0	86.2	0.4	9.6	97.8	1.1	0.08

[a] The figures in this table were developed by the Study Project on Social Research and Development. For more detailed information, see Mark A. Abramson (1978) *The Funding of Social Knowledge Production and Application: A Survey of Federal Agencies.* Study Project on Social Research and Development, Vol. 2. Washington, D.C.: National Academy of Sciences.

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TABLE 5-3 Social R&D Obligations of the Living Environment Agencies (fiscal 1977, $millions)[a]

		Knowledge Production Activities[b]					Knowledge Application Activities[b]			
Agency	Total	Research	Policy Formulation Demonstrations	Program Evaluation	General Purpose Statistics	Total	Policy Implementation Demonstrations	Development of Materials	Dissemination	Total
Department of Agriculture	285.7	64.6	0.4	5.7	43.9	114.6	—	0.5	170.6	171.1
Environmental Protection Agency	12.8	12.1	—	0.7	—	12.8	—	—	—	—
Department of Housing and Urban Development	68.4	14.6	19.4	4.0	11.3	49.3	9.4	3.7	6.0	19.1
Department of the Interior	13.3	9.6	—	0.6	1.7	11.9	0.1	0.7	0.6	1.4
Department of Transportation	110.0	44.0	17.1	1.9	20.8	83.8	7.9	9.3	9.0	26.2
TOTAL	490.2	144.9	36.9	12.9	77.7	272.4	17.4	14.2	186.2	217.8

[a] The figures in this table were developed by the Study Project on Social Research and Development. For more detailed information, see Mark A. Abramson (1978) *The Funding of Social Knowledge Production and Application: A Survey of Federal Agencies.* Study Project on Social Research and Development, Vol. 2. Washington, D.C.: National Academy of Sciences.

[b] For an explanation of the categories used by the Study Project on Social Research and Development, see the Introduction to this volume.

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more problem oriented, and its functions were split between the Agricultural Marketing Service and the Agricultural Research Service; research on sociological problems of rural populations was largely curtailed. However, in a reorganization of the department eight years later, Secretary of Agriculture Orville Freeman reassembled the dismembered parts of BAE, creating the present-day Economic Research Service.

Since its formation, BAE (now the Economic Research Service) has been the major social research arm of the department. Its research, along with increasing social R&D efforts by the Agricultural Research Service and the help of the state agricultural experiment stations, has provided a steady stream of social science information to farmers, agricultural industries, and policy makers. None of the other five agencies or their predecessors has a history of performing social R&D. The Department of the Interior and the agencies that make up the Department of Transportation and the Environmental Protection Agency were active in physical and natural science research, but not in social R&D.

THE SCOPE OF THE STUDY

Given the important role of government programs and policies in shaping the living environment, selecting the appropriate federal agencies for study was critical. A reasonable number had to be chosen—no more than one researcher could adequately handle—and those agencies having a major impact on the living environment had to be included. Thus the agencies analyzed in this study include living environment research in the following departments:

- Department of Agriculture, in particular the Economic Research Service, the Agricultural Research Service, and the Cooperative State Research Service
- Environmental Protection Agency
- Department of Housing and Urban Development
- Department of the Interior
- Department of Transportation

There are other organizations or parts of other departments and agencies—for example, the Federal Energy Administration, the Energy Research and Development Administration, the Tennessee Valley Authority, the Army Corps of Engineers—that could have been included under the living environment umbrella. However, the five selected represent the bulk of federal budget and programmatic resources in living environment activities, excluding human services (health, education,

TABLE 5-4 Social R&D Obligations of the Department of Agriculture (fiscal 1977, $millions)[a]

Policy Areas	Total Obligations	Activities[b]	Total Obligations
Health	$74.7	Research	$64.6
Education	54.1	Policy Formulation Demonstrations	
Social Services and Income Security	6.0	Program Evaluation	5.7
Economic Growth	44.3	General Purpose Statistics	43.9
Housing and Community Development	20.0	Development of Materials	0.5
International Affairs	9.6	Dissemination	170.6
Natural Resources and Environment	76.9		
TOTAL	285.7		285.7

[a] The figures in this table were developed by the Study Project on Social Research and Development. For more detailed information, see Mark A. Abramson (1978) *The Funding of Social Knowledge Production and Application: A Survey of Federal Agencies.* Study Project on Social Research and Development, Vol. 2. Washington, D.C.: National Academy of Sciences.

[b] For an explanation of the categories used by the Study Project on Social Research and Development, see the Introduction to this volume.

employment and training, etc.) and income maintenance (social security, Aid to Families with Dependent Children, etc.) programs, which are the subjects of separate case studies.

DEPARTMENT OF AGRICULTURE

THE LEVEL AND CONTENT OF SOCIAL R&D

The Department of Agriculture is the largest social R&D spender of the five agencies studied. Table 5-4 indicates the social R&D policy areas and activities for fiscal 1977.

In this study attention is directed primarily to social R&D conducted in-house by the Economic Research Service (ERS) and the Agricultural Research Service (ARS) and through cooperative arrangements with state agricultural experiment stations (SAES), which are serviced by the Cooperative State Research Service (CSRS). All ERS research can be classed as social research, whereas social research is a relatively small part of the total ARS and SAES research. These three organizations, although large and representative, do not encompass all social research in the Department of Agriculture. Significant social research and related activities are also conducted by the U.S. Forest Service, the Farmer Cooperative Service, the Statistical Reporting Service, and several other agencies.

To illustrate the types of social R&D undertaken, four Economic Research Service project summaries are reproduced from the farm income, agriculture production and marketing efficiency, rural development, and environmental improvement and resource development mission categories (U.S. Department of Agriculture 1974, pp. 3, 10, 33–34, 47):

Policy analysis—rice

To analyze the impacts of alternative U.S. policies ERS developed a world rice model. The analysis delineated 38 country-regions for which supply and demand relationships were specified. These relationships show how production and consumption relate to prices, population, weather, national income, use of fertilizer, extent of irrigation, high yielding varieties, and governmental policy variables.

Development of a farm and enterprise budget data system

During the past year, ERS and Oklahoma State University designed a system to generate farm and enterprise budgets. The system will provide data on input requirements and production costs which are needed to make estimates of supply response to changing costs, prices, and government programs and to estimate farm income. These types of data have been used extensively in the past for these same uses. The new system, located at the University, will be used to systematically estimate and update these data for all commodities and all major production areas, resulting in more uniformity and comparability across regions and over time. The system of whole farm will replace the former "Costs and Returns" series in providing general information on farm income for typical farming situations.

Human resource adjustments in the flue-cured tobacco regions

ERS has underway a study to identify the adjustment problems of rural people in the flue-cured tobacco region and to identify policies and programs for abating these problems in a way that will contribute to the development of the rural area. Both technological and demand forces will most probably bring about a considerable loss of employment in this traditionally labor-intensive industry. . . . Based on findings to date, the region, considering various measures of human well-being, lags significantly behind other areas of the country. Moreover, with the expected accelerated increase in technological change, certain areas in the region would experience significant increases in unemployment. Without special assistance, the well-being of the people in the region would fall even farther behind other parts of the Nation.

Air pollution in cotton ginning

In the area of cotton processing, ERS economists and agricultural engineers analyzed the cost of installing air pollution control equipment in cotton gins. Under present and anticipated pollution control regulations, cotton ginners will need to control air pollution caused by their operations. If the approximately 3,900 active gins are all required to install air pollution control equipment, total investment cost would exceed $100 million. Based on the ERS report, ginners will have information to determine (1) whether they can afford to comply with antipollution standards, and (2) the most economical means of carrying out the necessary measures. The report concludes that some small gins will be forced out of business earlier than anticipated. As cotton faces active competition from synthetics, any attempt to raise prices to consumers will encourage further losses of cotton's share of the market to synthetics. Thus, growers or ginners will probably absorb most of the cost increases resulting from the installation and use of air pollution control equipment.

Three important factors influence the conduct of social R&D in the Department of Agriculture. First, the management of the agricultural sector of the economy for more than 40 years has forced the department to institutionalize the use of economic analysis. Specifically, the department's most important decision-making activity, the setting of income, production, commodity, and export targets, has resulted in the continuing need for policy analysis and social R&D. Every three months ERS prepares a quarterly memorandum for the secretary of the department that details the outlook for farm production, the implications of this outlook on prices, the potential impact on farm income, and the necessary adjustments to department contingency plans over the next 12 months. Using this memorandum as the basis for the decision, the secretary makes an announcement required by the Agricultural Development Act regarding production targets—full production versus various possible levels of agricultural land set-asides.

Second, this need for understanding the production, distribution, demand, and marketing dynamics in the agricultural sector has resulted in the development of a large R&D network supported by the federal government, states, and private industry. ERS is made up of 850–900 researchers. Of these, 150 are located at land-grant universities around the United States with courtesy appointments at assistant, associate, and full professor ranks in departments of agricultural economics. Another 50 researchers are assigned outside the department to River Basin Commissions working in conjunction with specialists from the Soil Conservation Service, the Army Corps of Engineers, and the Bureau of Reclamation on river basin studies. The Agricultural Research Service has about 2,900 scientists and engineers, roughly 200 of whom are engaged in social R&D, in 145 locations across the country; 60 percent of the ARS researchers are located at college campuses or at substations near campuses. The CSRS provides funds to state agricultural experiment stations that, when mixed with state and corporate funds, provide support for agriculture R&D at land-grant colleges and universities in each of the 50 states. In fiscal 1977 a total of $27.2 million was obligated by CSRS to social R&D under the 1887 Hatch Act, which authorizes the partnership between the federal government and state agricultural experiment stations.

Third, the combination of 53 state agricultural experiment stations, 145 agricultural research stations, and 17,000 county extension agents has created a political network responsive to agribusiness and agricultural committees and subcommittees in Congress. The administrator of ARS, for example, meets regularly with delegations of interest groups representing the entire spectrum of agriculture producers and processors including, for example, soybean growers, cattle growers, and whey producers. Each of these groups is interested in getting ARS to investigate specific problems or develop specific products related to their commodity or industry; each also has strong ties to key members of Congress. Thus "... ARS works hard to honor the research requests made through these special interest channels," an ARS official pointed out.

The Planning and Budgeting System

The mechanism that the Department of Agriculture uses to allocate funds to individual social R&D projects and research organizations is the planning and budgeting system (PABS). The department does not have a separate management system for R&D planning or expenditure control. Each of the three major research organizations, however, has a somewhat different method of preparing its proposed R&D allocations for department approval.

PABS is a classic planning, programming, and budgeting system. The department has developed a mission-oriented program structure, which is used in the planning and budgeting process. All departmental activities fit within 10 program missions: Farm Income, Agriculture Production and Marketing Efficiency, Agricultural Exports, Food and Nutrition, Consumer Services and Human Resource Development, Rural Development, Environmental Improvement and Resource Development and Use, Support for Non-Federal Governments and Institutions, Foreign Agricultural Development, and General Administration and Program Support. The activities of organizations in the department are separated into roughly

290 program elements, each representing an identifiable bundle of resources. These program elements are the building blocks for the program missions.

Agencies develop program proposals and multiyear action plans and transmit their final agreed-on recommendations to the department's program and budget review committee, of which the under secretary is the chairman. The program and budget review committee studies the program agency recommendations, modifies them as needed, and makes its recommendations to the secretary. The secretary makes the final department decision on goals, objectives, programs, and program levels for subsequent review and approval by the president and Congress.

Two important considerations should be noted regarding the PABS and social R&D dollar allocations. First, social R&D project selection, that is, the determination of which problems are to be addressed and which researchers are to address them, is accomplished from the bottom up. Seldom does the review by the Office of the Secretary concern itself with individual projects or even programs. It focuses on the aggregate levels of expenditures targeted against each of the program missions. The size and complexity of the department's budget prohibits a more detailed review. In fact, there is little modification of research projects once a proposal has been developed by a researcher; modification does sometimes occur at the hands of a researcher's direct supervisor or because overall budget constraints force belt-tightening across the board. Budget decision making among and within the R&D agencies is incremental. Last year's budget share and the researchers' skills and interests, as evidenced by their proposals aggregated by agency, determine the level of funding for individual researchers assigned to ERS, ARS, and SAES. Decision making is largely decentralized; department heads at SAES, branch chiefs in ERS, and field station chiefs in ARS have the most to say about what is in or out of their proposed budgets.

Second, the bottom-up tradition and historical allocation patterns make it difficult for officials of the Office of the Secretary to target research against what they perceive to be the changing needs for knowledge among the 10 mission areas. The bulk of the projects recommended by researchers and research managers is targeted against two mission areas—farm income and agricultural production and marketing efficiency. Attempts by the Office of the Secretary to change the research priorities through larger resource allocations to the mission areas involving nutrition, consumer services, rural development, and environmental improvement have met strong resistance over a number of years in the research agencies and Congress; as a result, appropriations have always ended up in the more traditional pigeonholes—farm income and production and marketing efficiency.

Setting Priorities

One of the most vocal critics of the rigidity of research priorities within the department had been the Office of Planning and Evaluation and its former director. The office was abolished during August 1975, and the director chose early retirement as a result of a bureaucratic *coup d'etat* engineered largely by both the R&D and operating agencies. An evaluation of the Planning and Evaluation Office was conducted for the under secretary by a committee of four agency heads; the administrator of the Agricultural Research Service was one of the four. The committee recommended that the Office of the Assistant Secretary for Administration and Management assume the functions of planning and evaluation. One of the main concerns of the agency administrators was the constant criticism of their day-to-day operations and of their planning activities from the Office of Planning and Evaluation. ARS's exasperation over the continual pressure to change research priorities was one of the exposed nerves that led to the bureaucratic struggle. The *coup d'etat* is an example of what can happen to a support organization—particularly one without strong political backing—when the cultures of research operations and policy making clash. Granted, operating agencies within the department helped ARS to engineer the demise of the Office of Planning and Evaluation, but ARS played a key role.

At state agricultural experiment stations the resistance to changes in research priorities is often fierce as well. Deans at land-grant colleges have little control over researchers' programs. Usually these programs are responsive to major commercial farming interests, which finance about 10 percent of all nonfederal agricultural R&D at the colleges but, more importantly, are the powerful establishment in rural areas. Researchers are normally more responsive to agribusiness needs than to broader societal concerns not only because of the obvious power relationships but also because the researchers themselves are skilled in investigations of farm income and production and marketing efficiency. The newer topics requiring research, based on policy makers' perceptions of problems that need to be addressed, are not subjects with which most SAES researchers are comfortable.

Federal funds directed to SAES become state funds on receipt, and the director of each station is responsible for their proper expenditure. However, no federal funds can be spent on a project until the Cooperative

State Research Service staff in Washington approves the project. An elaborate process for the direction and coordination of research, the national and regional agricultural research planning system, which includes a national committee, regional committees, and research program groups, has been established with representation from the Department of Agriculture and the National Association of Land Grant Colleges at all levels to handle the review process. However, the entire planning and approval structure has little impact on the actual projects undertaken with federal funds: 93 percent of all projects receive automatic approval by the time they reach CSRS in Washington. The other 7 percent may be modified somewhat, and a few are turned down. Officials at CSRS emphasize the cooperative partnership aspect of their relationships with state stations. "There is no strong-arming by the federal government when it comes to research priorities at state experiment stations," said one CSRS official.

The Department of Agriculture seldom procures social R&D, or any R&D for that matter, through contracts, although ERS does spend about $2 million in contract funds for supportive services and research assistants for their employees located at universities. The role of the R&D manager varies somewhat among the R&D agencies. The R&D managers in ERS play the strongest role in shaping research priorities, whereas CSRS has little influence over state experiment station research, which is primarily responsive to state, local, and commercial needs. ARS falls somewhere in between but undertakes less social R&D than the other two organizations.

All R&D projects in the department are recorded in the Current Research Information System computer file. Officials in the department claim that there is no difficulty in disseminating useful results of R&D, including social R&D. Dissemination to individual farmers takes place through the Cooperative Agriculture Extension Service, with its 17,000 county extension agents. Each of these grants has a triple appointment (federal, state, and county) making the agent responsive to powerful local farmers, state legislators, and the federal government but also providing considerable autonomy by protecting the agent from domination by any of the three interests. Both ERS and ARS supply county agents with many types of publications for distribution to their clients. Area and county agents work directly with individuals, families, and groups to help them to apply the newest proven technology to everyday life. Technology transfer to industry and commercial interests takes place largely through the close working relationship among government researchers and representatives of the fertilizer, machinery, chemicals, and seed industries. These representatives in turn work with farmers and farmer groups on a daily basis. Department of Agriculture researchers are spread out all over the country and take part regularly in educational programs for their clientele. They write for the hundreds of local, regional, and national trade publications and farm journals; they appear at county fairs, state farm-and-home weeks, meetings of professional societies, and similar events. ARS produces radio and television tapes for distribution to rural stations across the country, and SAESS entertain streams of visitors who come seeking answers to specific or more general questions.

Social R&D, similar to other R&D in the Department of Agriculture, is seldom requested, dictated, or influenced by program managers of operational agencies. Most R&D managers interviewed admitted that there is little interaction between their organizations and the more operationally oriented agencies, such as the Farmers Home Administration or the Animal and Plant Health Inspection Service. The exception, of course, is the Office of the Secretary; although not an operating agency *per se*, the secretary's office is an important policy-making entity within the department; its role in setting production targets, for example, has important operational consequences. However, most research priorities are driven by the interests of the researchers themselves, the requests of an interaction with commercial agricultural interests, and the demands of congressional authorization and appropriation subcommittees. There is little social research within the department that cuts across the major mission areas, nor is there any attention paid to interagency social R&D aimed at problems common to both the Department of Agriculture and other living environment agencies.

ENVIRONMENTAL PROTECTION AGENCY

THE LEVEL AND CONTENT OF RESEARCH

The Environmental Protection Agency (EPA) is not a large spender in the social R&D area. It spends about $12.8 million, all of it in the natural resources and environment policy area. Social R&D makes up less than 0.5 percent of EPA's total budget and about 7 percent of the agency's total R&D expenditures.

Four program element summaries from an EPA listing of all socioeconomic research extramurally funded during fiscal 1975 are reproduced below to demonstrate the types of social R&D projects previously undertaken.

Water quality implementation research

Program Element Output: (1) Effective planning and optimization techniques for water quality management; (2) new or improved methods of data acquisition, transmission, processing and application; (3) innovative institutional arrangements for water quality management; and (4) techniques for evaluating the air pollution and solid waste effects of water pollution control. Emphasis will be on the socio-economic aspects. Program results will include reports, recommendations, demonstrations of practicality, and design criteria.[2]

Economics research

Program Element Output: Economic information for use in environmental decision making. To accomplish this goal, the following functions are to be performed on a continuing basis: (1) provide Congress, EPA and the public comprehensive studies of the economic consequences of current or proposed pollution legislation; (2) evaluate and propose economic means of controlling pollution; (3) investigate the economic consequence of specific situations associated with pollution abatement; (4) conceptualize and assess, in economic terms, the benefits to be derived from pollution abatement; (5) conceptualize and assess in economic terms the direct and indirect costs of achieving pollution abatement; (6) provide economic information necessary in the development and implementation of pollution regulations; (7) investigate, explain, and predict the relationship of pollution abatement to environmental, social and economic goals.[3]

Ecological impact

Program Element Output: Evaluation of the broader questions of environmental impact without regard to medium or category. The Office of Research and Development will expand its research in this area by: (1) carrying out research that will help EPA to make comments on environmental impact statements prepared by other Federal agencies; (2) investigating aspects of environmental quality not adequately considered in present environmental impact analyses; (3) developing measures of these and other aspects of environmental quality so as to determine change over time; and (4) investigating the underlying causes of environmental problems.[4]

Comprehensive environmental planning research

Program Element Output: Development of effective means for: (1) defining future environmental conditions, (2) relating these future conditions to existing conditions and trends, and (3) defining alternative means for achieving these future conditions. By using these tools the environmental policy-maker will be able to assess more effectively the long-term consequences of his decisions and to continually adjust his policy in order to achieve the desired set of future conditions. Program emphasis will be given to developing reliable quality of life indicators; defining alternative paths to reach desired futures; identifying new forms of pollution; and fostering the inclusion of environmental considerations in the comprehensive plans of communities, Regions, and States.[5]

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[2] Contract funds totaling $160,000 were available for this program element (U.S. Environmental Protection Agency 1974, p. 181).

[3] This program element was allocated $75,000 in grant money and $148,000 in contract funds (U.S. Environmental Protection Agency 1974, p. 186).

[4] This program element was allocated $315,000 in contract funds (U.S. Environmental Protection Agency 1974, p. 188).

THE PLANNING AND MANAGEMENT OF SOCIAL R&D

Social R&D is not a particularly important concern of EPA policy makers. From its inception as an agency in December 1970, EPA's assistant administrator for R&D has tried to isolate all R&D activities from the short-term analytical needs of the administrator and key staff to keep the R&D organization away from assignments that could be interpreted as fire-fighting, not research. As one EPA official argued: "Short-term analytical work—or 'gun slinging'—should remain the responsibility of the assistant administrator for planning and management. If the Office of R&D begins to take on such activities, it would ruin their scientific reputation and the expanding requirements would drive out long-term work."

The top leadership of EPA is made up largely of lawyers whose instincts seldom suggest that they turn to social R&D for possible answers. Instead, as another EPA official pointed out, they attempt ". . . to deal with issues through shrewd analysis of the public mood and intuition, relying more on conversations with Congressmen than scientists." From the perspective of the key decision makers, the Office of R&D has seldom produced policy-relevant studies, whether social or more technical, within the time constraints that statutory deadlines or public pressures create.

Most social R&D and other R&D activities at EPA fall within the responsibilities of the assistant administrator for R&D. Within his purview falls the preponderance of social R&D, most of the scientific and technical R&D activities, and the supervision of 15 field laboratories. However, there is some social R&D undertaken by the Office of Planning and Management and three abatement and control offices.

EPA's Office of Research and Development (ORD) has been the center of controversy for almost the entire five-year history of the agency. Program managers and the administrator's office alike have been highly critical of the relevance of the research undertaken. Too often research agendas have appeared to be directly related to researchers' subjective ideas and unrelated to policy makers' needs.

The initial R&D management system at EPA was extremely elaborate and required a good deal of paperwork. Anyone with a potential project or research need was required to submit a one-page project description outlining that need and stipulating a deadline for a final product. There was no limit to the number of one-page statements that could be submitted. Statements were funneled through either the assistant administrator's office or the appropriate regional administrator, catalogued, then assigned to one of the various field laboratories. At each of the laboratories, related one-page statements were integrated to form a research objective achievement plan (ROAP). Once the ROAPs were developed, laboratory directors and some staff members of ORD would meet to decide which ROAPs and which projects within those ROAPs would receive funds.

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[5] This program element was allocated $150,000 in grant money and $165,000 in contract funds (U.S. Environmental Protection Agency 1974, p. 193).

Operational program managers viewed the ROAP system as unworkable. Mechanisms for monitoring the progress of a proposal toward funding or for reviewing the research at intermediate stages did not exist. Many program managers believed that the essence of the system was a carefully constructed bureaucratic ploy to permit the research scientists in the laboratories to do what they wanted rather than support the needs of program managers. The program managers believed that, since researchers could submit their own one-page proposals, the system provided a means for researchers to write and then fund their own projects.

The administrator's office also held the view that, under the ROAP system, little policy-relevant research was forthcoming for the funds spent. However, there was reluctance to cut R&D funding, since that would imply to Congress and the public that EPA was downgrading the scientific basis on which it was supposedly regulating and would certainly initiate important criticism of the agency from scientific and environmental groups.

There is an ever-present tension at EPA between ORD and operating program managers over the role of research in regulation and standard setting. The program managers have decision and enforcement responsibility in regulatory matters. However, they can always use researchers as scapegoats in unpopular regulation, claiming that their standards reflect what is scientifically possible but that more creative research is needed to make regulation more palatable and effective.

In June 1975, a new assistant administrator for R&D was appointed. He immediately moved in two directions. He scrapped the ROAP system and he inserted himself into the mainstream of agency activities by taking an active part in the budget and regulatory decision-making processes, which his predecessor had largely ignored. He is now implementing a new R&D management system with critical milestones tied to the federal budget process.

The new management system calls for program managers to provide ORD with information on major areas of research needs. ORD then develops programs for these problems and incorporates them into agency research strategies with three- to five-year plans and yearly milestones that detail specific expected accomplishments. The milestones flow from accomplishment plans and work plans, two sets of formalized documents that are both prepared in the field by laboratory staffs. Much of ORD's administrative hierarchy in Washington, which was needed to manage the ROAP system, is being eliminated, and personnel are being transferred to the field laboratories. Nevertheless, the tension between researchers and program officials remains. Research administrators complain that the program managers are imprecise in defining their R&D needs, largely because the world they live in is different from the researchers' world. "All their needs are 3 to 12 months away, yet it often takes us 6 months just to develop and negotiate a contract," said one ORD manager.

Program managers and officials in the administrator's office are taking a wait-and-see attitude toward the new R&D management system. Some program managers see little evidence that they are going to have a role in determining which projects get funded or in reviewing the intermediate results of ongoing research. To others, the new approach appears more vague and complex than the ROAP system. Still others see it as a possible improvement.

Social R&D allocation decisions will take place outside the new system for the next few years until ORD is assured that specific topics of interest begin to receive attention. The assistant administrator for R&D plans to manage and select the social R&D projects with considerable care to ensure that they do not get buried by the scientific and technical preferences of the laboratories. He plans to keep his efforts in social R&D within four areas:

- investigating the relationships between land use patterns and air and water pollution regulations,
- developing methodologies with regard to measuring and describing benefits from pollution reduction,
- providing data and information helpful to states in making environmental decisions from planning through implementation, and
- investigating the social implications of various levels of pollution of the seas.

Contract research comprises 75 percent of EPA R&D, including social R&D; only 25 percent is performed in-house. During EPA's five-year history, a steady increase in contract research has taken place. The reason for this is largely increasing research budgets without commensurate staffing increases. This trend also results in a staffing mismatch; ORD contends that it does not have enough contract monitors and management specialists to deal with the heavy contract requirements. On the other hand, ORD has too many technicians and "hands-on" researchers for the amount of extramural research that it must oversee.

The foregoing discussion indicates that the assistant administrator for R&D is the key manager of R&D activities within EPA. However, the overall level of effort in R&D is largely determined in conjunction with program needs in the EPA budget process. Little attention is paid to research objectives, the selection of researchers, or the details of the proposed allocation of funds to projects in the budget process. Primary attention is paid to the level of funding compared with that for other agency activities and with previous years' allocations; the measuring stick used to evaluate the R&D program by other program managers is the perceived policy relevance of R&D results. As pointed out earlier, the EPA administrator's office believes that ORD has produced few results of a policy-relevant nature. However, it does believe that the consistent pressure for relevance has led to more relevant-sounding research programs.

The assistant administrator for planning and management is responsible for the EPA budget process and for making allocation recommendations to the administrator. He is also responsible for allocating about $4 million in policy research and analysis funds to assess the economic impacts of alternative regulatory and control schemes under consideration within EPA. The traditional isolation of ORD from the policy process and the need for short-term policy-oriented research and analysis led to the establishment of such research responsibilities outside ORD.

There appears to be little evidence that the top management of EPA is interested in stimulating interagency R&D. Instead, management is caught up in the day-to-day pressures of regulation and seldom has the time to consider the broader quality-of-life problems that society faces; thus it will probably not call for the investment of R&D resources on problems for which the answers are not likely to be available for two or more years in the future.

DISSEMINATION AND USER INVOLVEMENT

There is no effective mechanism for dissemination of R&D results in EPA outside the technology transfer program in the water area. ORD hopes to expand that program into other substantive areas. The goal is to produce more short summaries of research results and develop a systematic approach to reach as wide an audience as possible. The interagency problem is very much on ORD's conscience, but officials see little hope of serious progress on that front until internal management problems are resolved.

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

THE LEVEL AND CONTENT OF SOCIAL R&D

The Department of Housing and Urban Development (HUD) is unique among the living environment agencies in that the bulk of its R&D is social R&D. Moreover, it is an agency for which it is easy to determine the nature of social R&D activities, since the yearly budget justification of the Office of the Assistant Secretary for Policy Development and Research (PD&R) provides a detailed statement of R&D objectives and expenditures.

Table 5-5 presents a breakdown of the policy areas and activities in social R&D for fiscal 1977.

The bulk of HUD's R&D projects, except for the housing allowance experiment, is extremely technical and operational. In many cases

TABLE 5-5 Social R&D Obligations of the Department of Housing and Urban Development (fiscal 1977, $millions)[a]

Policy Area	Total Obligations	Activities[b]	Total Obligations
Health	1.0	Research	14.6
Housing and Community Development	65.4	Policy Formulation Demonstrations	19.4
Law Enforcement and Justice	0.4	Program Evaluation	4.0
Natural Resources and Environment	1.6	General Purpose Statistics	11.3
		Policy Implementation Demonstrations	9.4
		Development of Materials	3.7
		Dissemination	6.0
TOTAL	68.4		68.4

[a] The figures in this table were developed by the Study Project on Social Research and Development. For more detailed information, see Mark A. Abramson (1978) *The Funding of Social Knowledge Production and Application: A Survey of Federal Agencies.* Study Project on Social Research and Development, Vol. 2. Washington, D.C.: National Academy of Sciences.

[b] For an explanation of the categories used by the Study Project on Social Research and Development, see the Introduction to this volume.

technology or hardware are among the intermediate or final products.[6] Housing research accounts for close to half of all R&D dollars spent; another 20 percent is spent on transfers to the Bureau of the Census for the Annual Housing Survey and to the Federal Home Bank Loan Board for a neighborhood preservation and analysis demonstration. A selection of four programs in the remaining 30 percent of the PD&R budget provides a sampling of the other types of activities being funded.

Neighborhood preservation and revitalization: preservation analysis and demonstration

In 1976, new studies will be initiated to examine and specify the role of public service delivery patterns as a determinant or factor in neighborhood change, and to provide more detailed analyses of particularly innovative local preservation programs identified in earlier studies. A study of decision by individual homeowners and renters in neighborhoods experiencing racial transition, originally planned for 1975, will be started in 1976. Work to maintain and expand the catalog of preservation techniques is planned, and initial tests of the Joint Center's predictive model will be conducted for selected cities.[7]

Environmental improvement and resource conservation: effects of development on the environment

1976 research will emphasize continued development of environmental assessment techniques, study of air quality considerations in housing and community development, and methods for increasing speed and efficiency of environmental impact analyses. Natural hazard reduction methods, standards and procedures through land use and building practices will continue to be developed to support implementation of the Disaster Relief Act. Additional work includes continuing development of noise attenuation features, the evaluation of noise abatement policies, and assessment guidelines. The evaluation of the BART system environmental impact, and the study of integrated public services and transit are expected to be completed in 1976.[8]

Improving state and local government capabilities: management tools

The 1976 research program is divided into four areas: (1) identifying and transferring already existing management tools; (2) evaluation and field test verification of the tools developed in the capacity building demonstrations; (3) continued development of quick-reference materials for local officials; and (4) an intense effort to get research findings adopted through publications, conferences and seminars on specific topics and techniques.[9]

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[6] Operation Breakthrough, which attempted to encourage volume production, innovative technology, and advanced management methods in housing production, is perhaps the most well-known example.

[7] *Fiscal Year 1976 Research and Technology Program*, p. 40. Funding estimate for fiscal 1976 is $3,400,000.

[8] Funding estimate for fiscal 1976 is $1,700,000.

Improving public services: delivery methods

Work proposed for 1976 includes further testing and documentation of measures of productivity to aid local officials in evaluating how efficiently and effectively their resources are being used in the delivery of public services. In addition, based on emergency service deployment and other functional service methodology and productivity measurements, development is planned of a systematic approach which will enable city/urban county management to identify services where a reallocation of resources would have a significant net positive impact on the benefits to the community. The system would allow city officials to analyze overall major resource allocation trade-offs among functional services, e.g., fire, police, public works, library, recreational, and public works services, and determine satisfactory reallocations of resources. HUD telecommunications research will be limited to continuing support for the NAE committee.[10]

THE PLANNING AND MANAGEMENT OF SOCIAL R&D

Title V of the Housing and Urban Development Act of 1970 provides the blanket authorization of HUD's R&D program and "directs the Secretary to undertake programs of research, studies, testing and demonstrations relating to the mission and programs of the Department." Separate authorizations have established more-specific research objectives, including research and experimentation in housing allowances, housing abandonment, elimination of lead-based paint hazards, and housing for those with special needs, such as the physically handicapped and the elderly.

The annual budget process determines not only the level of R&D expenditures within HUD but also the allocation of those monies to various research objectives and program categories. PD&R has developed a systematic approach to drawing up the HUD R&D budget that includes meetings with state and local officials and university researchers to help define research problems to be addressed and priorities among those problems.

Early in the budget cycle, about April or May each year, PD&R asks HUD's program managers for their recommendations about appropriate department research activities for the fiscal year that is roughly 13–14 months away. The line or program assistant secretaries respond with outlines of their research needs and indicate priorities among those needs.

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[9] Funding estimate for fiscal 1976 is $1,600,000.

[10] Funding estimate for fiscal 1976 is $1,000,000.

Liaison is established between PD&R and each of these assistant secretaries in an attempt to provide a continuing channel of communication for resolving differences about problems to be addressed, research priorities, and the management of R&D contracts. However, PD&R reserves the right to decide which projects are funded.

PD&R views its role as one of balancing the needs of the department's program managers with its unique, farsighted, nonoperational position. It believes that its lack of operational responsibilities provides a comparative advantage over line agencies in anticipating future problem areas that research may help to mitigate. PD&R relies heavily on advisory groups in many areas—mayors, urban planning directors and consultants, academics, and industry specialists—to ensure the policy relevance of its undertakings. PD&R regularly comes into conflict with line organizations that, from PD&R's perspective, seek projects that are not research, are too short-term, and are already operational but attempt to use PD&R's budget as operating subsidies.

Representatives of HUD's operating programs do not have quite so rosy a picture of the R&D management process nor the same interpretation of the facts leading to conflicts over HUD's R&D budget. In fact, they level two major criticisms at PD&R: first, the R&D management system is a fiction and bears little resemblance to the way in which projects are actually selected for funding, and second, the array of R&D projects bears little relation to the stated preferences of program managers.

The program officials who were interviewed agreed that their views of research needs were solicited each spring by PD&R. However, they contend that little attention is paid to these requests, and, in fact, the final project list culminating in HUD's R&D requests in the President's budget bears little relationship to their requests of the previous spring. More importantly, they state that there is little communication between program offices and PD&R after projects have been funded. For them, the R&D management system is elaborate on paper or in discussions with outsiders, but "it's only eyewash."

An example of a project over which there was a total lack of communication, according to one program manager, was *The Costs of Sprawl,* a study completed in 1974 by the Real Estate Research Corporation of Chicago. The program manager argues that the study is directly related to the mission of the HUD planning office that he heads; yet PD&R let the contract for the study, monitored it, and accepted the final report without the knowledge of the community planning and development office. The ruffled feathers have been smoothed somewhat in this case, and a joint memorandum from both offices has publicized the report. Nevertheless, the program manager points out that this case had a relatively happy ending. "We're struggling today to get them to publish a monthly list of projects to let us know what's going on in this department in R&D."

The second major criticism of PD&R's management contends that project selection is not accomplished by consulting program managers in any systematic way. More specifically, two factors are at work in determining the actual allocation of R&D funds. First, the change in the HUD program structure has stripped the operating programs of funds and therefore the power to make discretionary grants to cities and interest groups. The Community Development Block Grant Program is the most significant culprit in this regard. Second, PD&R R&D funds are the only significant discretionary funds left in the department. Therefore, PD&R is beseiged by special-interest groups, trade associations, and cities with political clout—all of which have traditionally gone to HUD for discretionary funds. The outcome is a research agenda that reflects a carefully balanced distribution of grants and contracts to supportive interest groups rather than R&D projects based on program managers' needs.[11]

That political pressure is an important determinant in PD&R's budget allocation is indeed curious. In 1972 HUD's evaluation, policy development, and R&D funds were centralized in PD&R in the interest of promoting a stronger set of scholarly standards. More importantly, the secretary at that time, James T. Lynn, possessed an appreciation of the needs of scientific inquiry, an interest in R&D, and a belief that R&D funds left in the operating agencies (where they were before 1972) would tend to become slush funds for discretionary political purposes as HUD programs moved more and more toward block grants and revenue sharing. The lesson seems to be that politics intervenes in the R&D allocation process regardless of what office is responsible for management of the funds.

HUD program managers argue further that researchers and research monitors determine which projects are selected if the special-interest pressures do not dominate. Researchers tend to have specific views of what is important with the result that "hobby shops"—programs of research that reflect the unique interests of an investigator—begin to develop in narrowly defined areas. Additionally, officials in PD&R are not open about their research preferences, nor do they empathize with the program managers' needs. Instead they are arrogant, condescending, and formal—not a particularly helpful set of characteristics if coordination in R&D project selection, contracting, monitoring, and acceptance is deemed necessary and valuable.

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[11] A quick perusal of the contractors mentioned in *Fiscal Year 1976 Research and Technology Program* published by the Office of the Assistant Secretary for Policy Development and Research includes the National League of Cities/U.S. Conference of Mayors, the American Bar Association, the International Association of Assessing Officers, the National Association of Counties, the Advisory Commission on Intergovernmental Relations, the American Society of Landscape Architects Foundation, the National Association of Home Builders Research Foundation, and a number of universities and cities.

Grants comprise about 2 percent of the PD&R research budget. The remainder is allocated through contracts. Approximately two-thirds of the contracts are awarded on competitive grounds; formal panel review procedures are used for contracts for more than $250,000, in accordance with federal procurement procedures. The major recipients of HUD R&D contracts, according to PD&R, are for-profit and not-for-profit research institutes and consulting firms. Some contract work is accomplished by universities, although their share is considerably smaller than that of commercial firms. Little intramural research goes on within PD&R or other HUD agencies. The PD&R staff expends practically all its effort in developing the research program, monitoring contractors, and synthesizing research findings for use in policy development and decision-making processes.

Absent from HUD's R&D research agenda are attempts to understand the basic forces that have historically shaped urban development, leverage points for effecting change, and the appropriate federal, state, and local government roles in influencing such development. Although HUD possesses federal responsibility for urban and community development problems, its R&D agenda provides little emphasis on basic questions in these areas. Much greater emphasis is placed on narrower housing questions. One former assistant secretary for policy development and research recognized this shortcoming in HUD's research agenda and turned to the Urban Institute for help. The institute, in turn, has formed a group of researchers and an advisory committee to develop a list of the basic research questions in urban and community development. The end result may well be a small HUD grant program to support work in this area.

The centralization of R&D at HUD, the strong role of the assistant secretary for PD&R within HUD and among domestic agencies, and the level of social R&D spending suggest that, if interagency R&D that addresses fundamental development and growth issues in the living environment area is to be sponsored, PD&R may well be the most likely office to lead such an effort; however, such leadership has not been forthcoming. In fact, PD & R is engaged in little or no cross-cutting R & D, with the exception of the survey with the Bureau of Census and the preservation demonstration with the Federal Home Loan Bank Board.

DISSEMINATION AND USER INVESTMENT

Dissemination of research results is perceived as a problem in PD&R, and steps are being taken to try to solve it. Before a project is approved, a

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specific user or set of users of the project's results must be clearly identified. Additionally, a separate division for dissemination has been created in PD&R. Its budget for fiscal 1975 was about $350,000 and for fiscal 1976, $550,000. This division reviews each of the products that results from R&D expenditures, attempting to facilitate dissemination to all potentially interested users.

DEPARTMENT OF THE INTERIOR

Table 5-6 illustrates the importance of social R&D in the Department of the Interior: Social R&D comprises less than 0.3 percent of the department's budget, which was roughly $3.5 billion in fiscal 1977.

Table 5-6 also indicates the fragmented allocation of monies to social R&D at the Department of the Interior. The department is a collection of largely autonomous bureaus and agencies—a group of major and minor principalities, fiefdoms, and baronies—that sponsors social R&D on an *ad hoc*, unsystematic basis. As problems arise or as political pressures to act

TABLE 5-6 Social R&D Obligations of the Department of the Interior (fiscal 1977, $millions)[a]

Policy Area	Total Obligations	Activities[b]	Total Obligations
Health	1.2	Research	9.6
Education	2.2	Program Evaluation	0.6
Employment and Training	0.02	General Purpose Statistics	1.7
Economic Growth	1.4	Policy Implementation Demonstrations	0.1
Housing and Community Development	0.8	Development of Materials	0.7
Natural Resources and Environment	6.5	Dissemination	0.6
Energy Development and Conservation	1.1		
Science and Technology Base	0.08		
TOTAL	13.3		13.3

[a] The figures in this table were developed by the Study Project on Social Research and Development. For more detailed information, see Mark A. Abramson (1978) *The Funding of Social Knowledge Production and Application: A Survey of Federal Agencies*. Study Project on Social Research and Development, Vol. 2. Washington, D.C.: National Academy of Sciences.

[b] For an explanation of the categories used by the Study Project on Social Research and Development, see the Introduction to this volume.

are translated into "do a study," social R&D is undertaken. Unlike the centralized research management of EPA and HUD, there is no central focus for R&D activities, either social or other.

The planning and budget process of the department is the mechanism for determining the level of R&D expenditures and reviewing the objectives of R&D programs. However, social R&D activities are seldom considered in these discussions. The one exception that received considerable attention in the fiscal 1976 budget discussions was a $200,000 item of the $50 million requested for outer continental shelf baseline studies. The aim of the $200,000 project is to determine the social impacts of the development of the outer continental shelf in the Gulf of Alaska on small Alaskan villages and towns.

The Office of Water Research and Technology is the only agency in the department that utilizes the grant mechanism in funding research. Grants amount to roughly one-third of its total social R&D program. Other social R&D funds were allocated through contracts, as are the balance of the department's social R&D funds.

There is little or no intradepartmental coordination in social R&D at the department; as in most other activities, its bureaus and agencies operate independently. Neither is the department involved in interagency social R&D activities. Both of these facts stem from the tradition of a weak Office of the Secretary, a reluctance to use analytical techniques in department planning and budget processes, strong autonomous client-oriented bureaus and agencies, and congressional legislative and appropriations subcommittees that exercise strong oversight in the details of bureau and agency operations and expenditure patterns.

DEPARTMENT OF TRANSPORTATION

THE LEVEL AND CONTENT OF SOCIAL R&D

Until late 1973, the Department of Transportation (DOT) had no office responsible for monitoring social R&D. A number of surprise events, including dire warnings regarding the Morgantown personalized rapid transit experiment and the energy crisis, led the secretary of transportation to ask the assistant secretary for policy, plans and international affairs to establish such an office. The secretary's interest was to determine what problems were being addressed by the department's social R&D and then to attempt to influence the selection of problems with a series of questions that he believed needed to be answered. In late 1973, the Socio-Economic Co-ordination Staff was established, and in March 1974 it conducted a

TABLE 5-7 Social R&D Obligations of the Department of Transportation (fiscal 1977, $millions)[a]

Activities[b]	Total Obligations
Research	44.0
Policy Formulation Demonstrations	17.1
Program Evaluation	1.9
General Purpose Statistics	20.8
Policy Implementation Demonstrations	7.9
Development of Materials	9.3
Dissemination	9.0
TOTAL	110.0

[a] The figures in this table were developed by the Study Project on Social Research and Development. For more detailed information, see Mark A. Abramson (1978) *The Funding of Social Knowledge Production and Application: A Survey of Federal Agencies.* Study Project on Social Research and Development, Vol. 2. Washington, D.C.: National Academy of Sciences.

[b] For an explanation of the categories used by the Study Project on Social Research and Development, see the Introduction to this volume.

survey to assess the ongoing and planned projects for both fiscal 1974 and 1975. Table 5-7 outlines social R&D spending in DOT for fiscal 1977; these funds were spent entirely in the transportation policy area.

THE PLANNING AND MANAGEMENT OF SOCIAL R&D

The Department of Transportation is a department in name only—actually it is a collection of operating agencies and staffs that seem to deal with one another at arm's length. The operating agencies report directly to the secretary. The secretary's staff seems to spend little time talking to one another and little effort coordinating the activities of the operating agencies. Thus the secretary's staff has little influence with the operating agencies.

The management of R&D in the department illustrates these points. The responsibility for R&D oversight and coordination in the Office of the Secretary lies with the assistant secretary for systems development and technology (called TST) for "hard" research and with the assistant secretary for policy, plans, and international affairs (called TPI) for socioeconomic research. In addition to their staff functions, both TST and

TPI have their own R&D funds, and each devotes the majority of his R&D time allocating and managing those monies. Each has established his own system for cataloguing the R&D that falls within his responsibility as a result of both oversight and direct operations. The systems are not compatible, nor are they well known or useful to the operating agencies, all six of which have their own R&D programs as well. TST has been more effective in using the budget process to affect the R&D programs of the operating agencies, largely because R&D is the major function of TST and has received considerable attention, whereas R&D oversight has not been viewed as one of the major functions of TPI. Neither assistant secretary has developed a system that attempts to set R&D objectives and determine priorities for the entire department.

Each of the six operating agencies (or modes)[12] has an associate administrator for R&D, who is the R&D program manager and who has the principal responsibility within that agency for determining what types of R&D projects will be funded. The hardware and technology-oriented programs of the associate administrators for R&D are reviewed twice a year by the R&D Planning and Policy Offices in the Office of the Secretary, but research priorities are little changed by the TST staff. The socioeconomic research priorities proposed by the modes have never been reviewed by the assistant secretary for policy, plans, and international affairs. In effect, the associate administrators for R&D in DOT have their own fiefdoms with little direction from the Office of the Secretary.

The lack of coordinated activity was recognized by a DOT secretary, who hired a consulting firm to study ways of strengthening R&D and program management in DOT. The consultants delivered their report, *Strengthening Grant and Research Program Management in the Department of Transportation,* in summer 1974. The report called for the development of issue identification, strategic planning, and program review processes tied directly to the federal budget process. The strategic planning process included the development of an R&D strategic plan for DOT prepared by the assistant secretary for systems development and technology. Although TST is attempting such an effort, a change of secretaries and a bureaucratic dispute in the Office of the Secretary has delayed implementation of the recommendations of the report. The dispute concerns which secretarial office will have responsibility for the tasks outlined in the consultants' proposal. Thus DOT research continues to be managed as eight separate programs—two in the Office of the Secretary and one in each of the modes.

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[12] The six are: the National Highway Traffic Safety Administration, the Urban Mass Transit Administration, the Federal Highway Administration, the Federal Railway Administration, the Federal Aviation Administration, and the U.S. Coast Guard. DOT's seventh operating agency, the Saint Lawrence Seaway Development Corporation, is not included in this discussion.

Major decisions about the size and project distribution for R&D expenditures within DOT's eight R&D programs are made in conjunction with the annual budget process by the R&D managers. There is a spring preview, but the important decisions about the total agency R&D expenditures are made largely by the deputy under secretary for budget and program review in the final markup before secretary approval in late summer. DOT social R&D has never been scrutinized carefully in either the spring preview or the final markup. Researchers and contract monitors, in the Office of the Secretary and in the operating agencies, have had a free hand in deciding what types of social R&D projects to undertake; funding requires R&D manager approval only. Review by TST and TPI or their staffs is largely *pro forma.* The attempt being made, through the Socio-Economic Co-ordination Staff, to develop research objectives and scrutinize social R&D projects in terms of those objectives is still a few years away from actual implementation. The assistant secretary for policy, plans, and international affairs intends in the future to set priorities and review all social R&D projects for conformity to a DOT socioeconomic R&D strategy.

Most social R&D projects at DOT are performed through contracts. A regular review system that follows federal procurement regulations provides the mechanism for selecting researchers. The bulk of the contracts are won in competitive bidding, with fewer and fewer sole-source contracts. Each of the operating agencies has a consulting and research contracting industry that has grown up largely around its research efforts. The Office of the Secretary uses the Transportation Systems Center in Boston, which is an in-house research group inherited from the National Aeronautics and Space Administration. The center is under the direction of the assistant secretary for systems development and technology and subsists on the internal transfer of funds generated by the needs of the Office of the Secretary and those of the modes.

As one might suspect from this discussion, little intradepartmental R&D is taking place in DOT. This is true of both technical and social R&D. An assistant secretary pointed out, "it is impossible to get 'intermodal' activity started without using Office of the Secretary seed money; then projects often wither on the vine if outside money does not continue." Although policy panels for interagency R&D exist at DOT, they were described as "window dressing."

Others in the Office of the Secretary and in the operating agencies confirmed these views. For example, the budget reveals little interagency activity, and trying to force such a perspective through the budget process has been largely unsuccessful. Nevertheless, the Office of Policy, Plans, and International Affairs hopes to stimulate operating agencies to increase the amount of cross-cutting social R&D that deals with transportation and mobility issues rather than with the more specific issues related to modal operations in current-year and subsequent budget discussions. The prospects of success, however, are not high.

Just as "intermodal" R&D takes a back seat at DOT, so does interdepartmental social R&D. Officials in the Office of the Secretary could point to only one social R&D project undertaken jointly with another federal agency: a journey-to-work survey with HUD was the example. The primary focus of DOT R&D is problems relating to the specific operational characteristics of the six modal agencies. Nevertheless, top management in the Office of the Secretary sees a need for a coordinated interdepartmental R&D program, particularly with HUD, the Department of Energy, and EPA as partners.

DISSEMINATION AND USER INVESTMENT

The dissemination of scientific and technical R&D results has received considerable attention and resources in the DOT budget over the last three years. Through field offices, publications, advisory panels, conferences, and long-established clientele relationships—the Federal Highway Administration and state highway departments, for example—technology sharing takes place on an increasingly systematic basis. Problems remain, but they are being carefully monitored.

The dissemination of social R&D, however, is much more an *ad hoc* operation. Results are not disseminated through the Technology Sharing System, which is the responsibility of the assistant secretary for systems development and technology. Mailing lists and the Department of Commerce's Technical Information Service are relied on instead. Much of the social R&D produced for the Office of Policy, Plans, and International Affairs is viewed as produced for the secretary and thus is assumed not to require dissemination.

INTERAGENCY ACTIVITIES AND OVERSIGHT

The detailed discussion of the five living environment agencies demonstrates quite clearly that little cross-cutting social R&D takes place within departments or among departments and agencies. Although many of the policy officials interviewed would like more cross-cutting investigations undertaken and believe that the results of such studies would be helpful to them, the reward and incentive system for researchers and research managers stimulates little such activity.

However, do organizations that have oversight and coordination functions rather than a programmatic function suffer from the same handicaps as program agencies when it comes to stimulating cross-cutting R&D? One of the conjectures of this study (see the introduction by Lynn) is that even organizations with oversight and coordination missions, such as OMB and the Domestic Council, are likely to define their responsibilities in terms of categorical program boundaries rather than in terms of cross-cutting problems. To determine the validity of this conjecture, individuals in both OMB and the Domestic Council, who were concerned with policy problems in the living environment area, were interviewed.

OFFICE OF MANAGEMENT AND BUDGET

During preparation of the fiscal 1976 budget, all OMB budget examiners with responsibility for R&D programs were called together for a meeting. The meeting was to address OMB's perspective on R&D: how much cross-cutting R&D was taking place against what examiners believed was needed, and how might OMB exert better leadership in the management of R&D throughout the federal government? The meeting was a fiasco—no consensus developed. Each examiner was interested in his or her programmatic responsibilities, not in the broader issues that cut across a number of programs in different departments and agencies. Six major executive branch organizations, for example, had a direct interest in or operated housing programs—HUD, the Department of Agriculture, the Veterans Administration, the Department of Defense, the Department of the Interior, and the Federal Home Loan Bank Board; the examiners for these organizations had an interest in housing R&D. Yet these same examiners did not wish to forsake their familiar programmatic territories for the broader issues and research needs that relate all housing programs and problems.

Branches, divisions, and directorates in OMB are organized in a pattern that provides congruency with executive bureaus, agencies, and departments; OMB is organized by agency, making horizontal coordination with examiners' reviewing other departments and agencies unusual and unlikely. OMB oversight, therefore, is a prisoner of that organization. Too often its response is merely the assembled and diverse views of various budget examiners strung together. OMB middle management is aware that this approach often misses important forests because of the preponderance of trees but has little idea how to accomplish a broader approach without giving up the leverage that comes from careful, detailed program review. In the area of R&D (OMB seldom breaks this subject into social R&D and other R&D), the need for a broader perspective and more emphasis on cross-cutting social R&D is recognized. For example, research that would examine alternative forms of development and preservation is viewed as important to policy making. How to implement such a shift of R&D emphasis among living environment agencies from the vantage of OMB, however, is not clear to the examiners and their immediate supervisors, who are rewarded on the basis of their work on individual programs.

DOMESTIC COUNCIL

OMB examiners were knowledgeable about the social R&D programs in each of their agencies and were concerned about the policy relevance, level of spending, lack of cross-cutting topics, and overall management of their research programs. However, the staff of the Domestic Council, with one important exception, seemed oblivious to the entire social R&D effort undertaken by the federal government.

Major political crises, coordinating with their OMB and departmental counterparts, and working to solve specific day-to-day problems in areas of responsibility absorb most of the working hours for Domestic Council staff. They are not concerned with broad questions; they seldom have the luxury to set goals and look ahead two to five years. They are prisoners of the programmatic structures, like the OMB budget examiners, that provide them with their oversight authority. By and large, they do not have the time or the inclination to think about the relevance of social R&D, its level of funding, or the need for more or less cross-cutting social R&D.

ASSESSMENT

Three basic questions were posed at the beginning of the research that led to this study of social R&D in living environment agencies:

- What types of social R&D are being supported by living environment agencies, and what levels of resources are allocated to social R&D?
- Who decides on the level of resources to be allocated to social R&D, who defines the problems to be addressed, and how are these decisions reached?
- Are potential users of R&D results involved in R&D decision making,

and how are results made available to program managers or other interested parties?

Summary answers to these questions provide an assessment of social R&D activities in the five living environment agencies studied.

THE LEVEL AND CONTENT OF SOCIAL R&D

Grouping the five agencies under the living environment banner is a useful conceptual device to help one think about issues and problems unconstrained by existing organizational and programmatic structures. However, it is not a classification that is particularly useful to insiders in any of the agencies studied. Each agency sees itself as unique and works on what it defines as largely its own problems.

The perspective of government research officials is to work on problems that are related, rather directly, to the attainment of their organization's mission; there is little payoff for tackling problems broader than that central responsibility. In fact, broad problem definitions may provide disincentives for some research organizations if bureaucratic fights and territorial squabbles result. There is safety and security in narrow expertise. Researchers and research managers are attracted to bureaus, agencies, and departments by the nature of operating missions, but, more importantly, by the opportunity to exercise their professional skills. Few are systematically interdisciplinary in their thinking or able to range across the breadth of substantive problems inherent in issues that cut across the missions of two or more agencies.

Tables 5-1–5-3 provide an overall picture of the level of social R&D expenditures, types of research activities, and the policy areas that are investigated. Examples of the types of projects undertaken have been provided for the agencies studied. However, this investigation has not provided a detailed understanding of the substance of the R&D efforts in each of the five agencies. Such a study would be an extremely useful next step in assessing the R&D effort in living environment agencies.

If such a study were undertaken, it might be possible to judge whether the level of social R&D spending in living environment agencies—$490 million in fiscal 1977—and the distribution of those funds among the five agencies ought to be rearranged. The evidence presented here leads to two rather general conclusions.

As Table 5-1 makes clear, there is a large imbalance in social R&D spending among the five agencies, with EPA and the Department of the Interior spending considerably less than the rest. HUD and DOT spent 14 and

22 percent, respectively, of total social R&D expenditures in living environment agencies in fiscal 1977. The Department of Agriculture tops the list with 58 percent of aggregate social R&D expenditures in fiscal 1977. The level of spending among the five agencies is considerable, and a careful scrutiny of the substance of R&D might lead to the conclusion that some redistribution of social R&D funds among the five agencies or adjustments in the level of spending are in order.

It is possible to say conclusively that very little cross-cutting R&D is taking place among the five living environment agencies; yet many of the policy makers interviewed would like to see such studies undertaken and claim that the results would be helpful in their decision making. Why has not this demand stimulated more activity? The answer seems understandable.

The average tenure of cabinet officials, agency heads, and their key policy advisers is not long—two to three years at the most (Stanley *et al.* 1967). It is rare that these officials know from the beginning what types of cross-cutting R&D should be undertaken especially when the pressures from the operating programs are to make decisions (and therefore learn) about the mission-oriented programmatic operations. Thus, by the time policy officials begin, if ever, to acquire an understanding of the need for more-comprehensive social R&D, they are normally ready to leave their positions. Additionally, lead time for research results is such that few see themselves staying long enough to see the results of research available; thus the investment in knowledge is seldom pushed as a top priority.

In the area of national security, disincentives to cross-cutting research seem to have been overcome through the tradition of investing in R&D stemming from operations research work during World War II and large defense budgets. The National Security Council machinery also regularly creates the requirement for interagency cross-cutting studies. On the civil side, the establishment of cabinet committees or the Domestic Council has not led to a similar demand for interagency research.

If a more-detailed knowledge of the substance of social R&D in the five living environment agencies existed, it would be easier to decide whether cross-cutting R&D projects should be funded in lieu of some ongoing ones within the present level of funding or if new money was needed to launch such an effort. In either case, we would still be left with the question of what types of incentives need to be created in what organizations to make cross-cutting R&D prosper Perhaps the answer lies in a new agency in the executive branch or in establishing a lead agency either from among the living environment group (perhaps HUD) or by giving the National Science Foundation the responsibility. Another possibility is providing Congress (perhaps the Office of Technology Assessment) with the responsibility. In any case, the subject needs considerably more thought and more study.

THE PLANNING AND MANAGEMENT OF SOCIAL R&D

There is little purposeful management of social R&D among the living environment agencies, except in EPA, and there the system was judged ineffective and a waste of money and time. The ongoing attempt is too new to judge.

The level of resources devoted to social R&D in the living environment agencies is determined in the context of the budget process, usually by the secretary (the administrator in EPA) or a secretarial budget-review committee. Last year's budget and competing program needs are the yardsticks for making these determinations, which are often arrived at implicitly since social R&D expenditures large enough to be explicitly identified in such a process exist only in the Department of Agriculture and HUD.

In none of the five agencies studied did program managers regularly define the R&D problems. In the two agencies with major in-house research efforts (the Department of Agriculture and EPA) researchers, for the most part, define the problems to be addressed. There may be outside communication with client or interest groups, as happens frequently at state agricultural experiment stations or among Agricultural Research Service officials; but few problems are redefined once a proposal passes a researcher's immediate supervisor. In agencies in which the bulk of the R&D is procured through contracts (HUD and DOT), researchers and research monitors define problems to be addressed, although special-interest groups are often consulted about potential projects and are sometimes the recipients of research contracts.

Most extramural R&D in living environment agencies is procured through competitive, not sole-source, contracts. Consulting and research firms have grown up that specialize in the research problems of individual R&D programs. Once established, they lobby hard for more competitive contracting and fewer grants. The reason for this is quite simple: more competitive contracting means that a larger fraction of R&D funds goes to for-profit firms; universities and not-for-profit research organizations fare better in a world of grants.

The initial movements by the federal government toward competitive contracting were positive, but this investigation of living environment agencies suggests that perhaps we have gone too far in support of it in some cases. Theoretically, contract research is more appropriate when research managers can adequately define the problem they wish investigated and relate it to their overall objectives. On the other hand, grants are a more sensible instrument when the government wishes to buy support in an area in which the problem can be defined better by researchers than by federal R&D managers. These distinctions seem largely lost on agency procurement officers and OMB, as both push for more and more competitive contracting, regardless of the objectives. OMB's posture often reflects its inability to control allocations for R&D expenditures in Congress, whereas it can exercise control on staffing in the agencies. Thus increasing R&D funds without increasing the number of researchers forces the agencies to turn more often to contracting.

DISSEMINATION AND USER INVOLVEMENT

Potential users of social R&D are seldom involved in R&D decision making. As one might expect, the more policy-relevant the R&D, the more potential users are likely to be involved in R&D decision making; and the most policy-relevant R&D is normally a required ingredient in a regular action-forcing process that demands policy makers' attention. The setting of production targets in the Department of Agricultural or the scientific basis for regulatory decisions at EPA are the two significant examples of such action-forcing events. The housing allowance experiment at HUD is a third noteworthy example of policy-relevant R&D. Key HUD decision makers have been intimately involved in reviewing and monitoring the design and progress of this R&D project, because the outcome is extremely important to future department decisions about the nature of federal intervention in housing markets.

However, in most other cases, those who are not R&D program managers are seldom involved in R&D decision making. The program managers learn about new projects, those in progress, or results through *ad hoc* intradepartmental systems for liaison, coordination, and dissemination. The different bureaucratic perspectives of R&D managers, on one hand, who need a two- or three-year time horizon and are willing to put aside the short-term perspectives of operating programs, and operating program managers, on the other, who survive day to day by solving concrete operational problems, create an inevitable tension and rivalry. Thus program managers are seldom involved in R&D decision making, because R&D managers claim that they cannot define their needs except in three-month increments; and program managers complain about the usefulness of R&D results, which seldom fit with the expertise they have acquired through day-to-day experience.

The dissemination of research results to interested parties outside the agency sponsoring the R&D is almost always thought of in terms of individual products from individual projects. Within this context all five agencies are concerned about the effectiveness of their dissemination efforts and are working to increase their effectiveness. All realize that marketing their results to those who find them useful strengthens the political network that can be used later when new authorizations or increased appropriations require advocates outside government. The Department of Agriculture's success in this regard is seen by other living environment agencies as a model to be copied.

Dissemination is rarely thought of in terms of providing interested parties with a whole body of knowledge that has been developed through R&D and experience. Focusing dissemination efforts on individual products and incremental gains in knowledge means that users are likely to miss the forest for the trees. More thought needs to be given to target audiences for research results in terms broader than individual projects. Perhaps some additional analytical work that summarizes R&D results in a particular area and demonstrates how new results fit into that body of knowledge would increase the utility of results to users.

REFERENCES

Berry, Brian J. L., and Gillard, Quentin (1977) *The Changing Shape of Metropolitan America.* Cambridge, Mass.: Ballinger.

Honey, Rex (1976) Metropolitan governance. In John S. Adamas, ed., *Urban Policymaking and Metropolitan Dynamics.* Cambridge, Mass.: Ballinger.

Stanley, David T., Mann, Dean E., and Doig, Jameson W. (1967) *Men Who Govern.* Washington, D.C.: Brookings Institution.

U.S. Department of Agricultural (1974) *Research Results for FY 1974 and Plans for FY 1975 and FY 1976.* Economic Research Service. Washington, D.C.: U.S. Department of Agriculture.

U.S. Environmental Protection Agency (1974) *EXPRO '75: A Listing of Extramural Projects to be Funded in Fiscal Year 1975.* Office of Research and Development. Washington, D.C.: U.S. Environmental Protection Agency.

6 Insights and Lessons

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Our study of how federal agencies manage social R&D has produced one central insight—the enormous diversity of the knowledge production enterprise. The agency studies summarized in the preceding chapters have revealed a wide range of management systems and methods of financial support, a complicated array of social R&D activities fulfilling many different purposes, numerous types of performers of varying capabilities, wide variations in the quality of the work performed, sharp differences in the extent to which findings are disseminated and used, and few if any clear ideas about what is being accomplished.

The character of the social R&D enterprise is not simply a reflection of poor management. The agency studies make clear that a great many actors and institutions influence federally supported social R&D. A complicated governmental system for seeking and using knowledge has produced a complicated social R&D enterprise. The diversity that we have observed reflects the pluralism and complexity of the policymaking process.

Some in the research community would like to depoliticize decisions concerning the amount and allocation of resources devoted to knowledge production and application. The fact that such a result could be achieved only through high political strategy—How could a Congress

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NOTE: John M. Seidl and Christine L. Davis collaborated with me in the development of ideas for this chapter.

that in 1976 almost gave itself the power to review every National Science Foundation grant award be persuaded to give up its role in social R&D altogether?—is a convincing indication that social R&D cannot be "rescued" from the policy-making process and its complexities and vicissitudes. It is through the political process that federally supported social R&D receives legitimacy and support, and it is through the political process that many of its results will ultimately be used for the betterment of society. Those concerned with improving social R&D must understand and come to terms with that process.

The agency studies have also revealed that little systematic attention is given by oversight institutions—the Domestic Council, the Office of Management and Budget, the central planning and budgeting offices of federal departments, congressional appropriations committees, the General Accounting Office—to the larger issues relating to the federal role in knowledge production. In fact, these institutions pay little attention to the mundane problems that social R&D offices have in common that might be correctable through better management. Although complaints about poor quality and useless research were numerous, those with oversight responsibilities more often than not displayed a punitive or resigned attitude toward government research administrators rather than constructive and well-informed concern about improving the management of knowledge production in a fundamental sense.

In favor of the critics, however, it must be said that it is not at all clear what kinds of management improvements constructive concern ought to produce. Where does one begin in trying to improve the quality and usefulness of such a diverse and far-flung set of activities? This concluding chapter attempts to draw some lessons from the agency studies that will be helpful in formulating improvements in social R&D management.

In the next section, key conclusions concerning federal social R&D management derived from the agency studies are discussed. The discussion is generally critical of current practices. Where possible, observations and considerations are supported by specific examples and citations from the studies. However, we want to avoid the appearance of unfairly singling out individuals and offices for criticism. We also want to respect the requests of persons interviewed that their critical remarks not be given wide publicity. For these reasons, specific citations have been omitted.

In the final section, an attempt is made to develop a framework in which to analyze the actions of the social R&D manager. Its purpose is twofold. First, it can serve as a basis for developing a more fundamental understanding of how social R&D outcomes are determined. Second, it can assist in devising management steps that will alter the incentives governing federally assisted knowledge production and application in ways desired by the potential users of that research.

THE MANAGEMENT OF SOCIAL R&D: CONCLUSIONS

A wealth of detailed knowledge and insights was generated in the course of the management studies. Sorting through this material produced ideas and conclusions that can conveniently be grouped into seven clusters or themes: (1) instruments of support, (2) dissemination of research results, (3) interagency and interdepartmental relations, (4) patterns of funding, (5) the role of knowledge brokers, (6) the influence of users and sponsors, and (7) the functions of research management. These themes are discussed in turn.

INSTRUMENTS OF SUPPORT: GRANTS, CONTRACTS, AND INTRAMURAL RESEARCH

According to conventional wisdom, grants are appropriate when the sponsor desires to provide general support for researchers seeking new knowledge and new methods for obtaining knowledge. Contracts are appropriate when the sponsor desires specific knowledge and wishes to hold the researcher accountable for producing it.

Whereas some research offices selectively employ grants and contracts, depending on their appropriateness to the type of knowledge being sought, the general impression created by the agency studies is that no consistent pattern of grant and contract use exists across the government. Some agencies use contracts almost exclusively; others place exclusive reliance on grants; while still others use both instruments in varying proportions.

This diversity cannot be explained by consistent differences in the specificity of the knowledge being sought or in the desire on the part of management to hold researchers accountable to the funding source. There are numerous instances of contracts supporting general advances in methodology and grants funding specific state-of-the-art applications at designated sites. According to the conventional view, the "wrong" instrument of support is being used quite often.

The evidence suggests, however, that the conventional view needs revising: because of recent innovations in research management, grants and contracts can be used virtually interchangeably. Many granting offices use program announcements, requests for applications, or collaborative arrangements between grantor and researcher to guide performer activity into high-priority areas. Contracts are written and funded in ways that create grantlike circumstances for the performer. Many granting agencies are energetic in seeking to hold performers accountable for producing and disseminating usable results; contracting agencies often keep only a loose rein on their contractors.

Sophistication in the use grant and contract instruments and knowledge about the possibilities vary widely among federal research administrators. Several who assisted in the management studies suggested the desirability of better communications among research administrators concerning problems of grant and contract administration.

It would be a mistake to conclude from this discussion that the choice of instrument does not matter. For one thing, contracts symbolize a concern for performer accountability; grants symbolize a respect for performer autonomy and initiative. The symbolic meaning of these instruments can be important in agency-performer communications and to the reputation of the research agency with political authorities.

Of even greater significance is that grants are usually awarded to universities, whereas contracts, especially competitive ones, are typically won by research and consulting firms. This distinction between types of performers is far from clear-cut; many university-based researchers have formed management consulting firms to facilitate their bidding on and winning of competitively awarded contracts. This phenomenon notwithstanding, however, the primary significance of the emphasis on contracting during the past few years has probably been to support the growth of a relatively new performer sector that operates outside the norms and constraints of the academic research community.

An increasing number of research administrators and performers have questioned the effects of this shift on the quality and ultimate usefulness of social R&D. In their view, the most qualified researchers are to be found at or in close association with universities, not in for-profit firms.[1] Academics, with their inbred resistance to government-enforced accountability and its unscientific overtones, may nevertheless be a better investment than the low bidders on requests for proposals.

The scope of the management studies did not include examination of the quality of federally supported research, so views such as the one expressed above cannot be evaluated. We can conclude, however, that oversight institutions should do two things. First, they should promote more widespread knowledge among federal research administrators concerning grant and contract administration. Second, they should begin to study more systematically the quality of federally supported research with a view to gaining an understanding of the interactions among method of support, type of performer, and the quality and overall usefulness of the results.

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[1] Another important line of criticism is that of Albert D. Biderman and Laure M. Sharp, who argue that federal contract-management practices exacerbate the tendency for contract awards to reward proposal-writing capacity over research capacity (for a summary, see Biderman and Sharp 1974).

DISSEMINATION OF RESEARCH RESULTS

Emphasis among research agencies on disseminating research results ranges from heavy to nonexistent. With few exceptions, however—the most notable being in the Department of Agriculture and the Social Security Administration—there is little developed policy concerning dissemination. There are several reasons for this situation.

First, research administrators with strong academic orientations believe that they already have a dissemination mechanism in the academic publications process. The pressure to publish in the academic world will, in their view, guarantee that worthwhile findings are disseminated. These same administrators are apt to share the academicians' relative lack of interest in becoming popularizers or brokers.

Second, even where academic mores do not prevail, bureaucratic incentives to disseminate findings are weak and often conflicting. Research findings may be politically and scientifically controversial, and research managers may be reluctant to be drawn into the defensive role that controversial research tends to thrust on them. Also, management attention tends to focus on budgets, new starts and renewals, and other bread-and-butter matters of concern to executive oversight offices, congressional committees, and performers. The performance of social R&D administrators is almost never judged on the basis of whether the findings of completed research are being disseminated.

Third, there may be little to disseminate. Because the agency studies did not cover research quality, not much can be said on this point. Impressions are sufficiently strong, however, to warrant the observation that too few projects or programs of research produce results that research managers want to take credit for and disseminate.

This latter observation leads to a second conclusion. When discussing research results and their dissemination, research administrators and oversight personnel alike typically think in terms of individual research projects rather than programs of research or knowledge production. This is not only natural—it is perhaps inevitable. Bureaucratic processes cause management activity to be organized in terms of individual projects: grants, contracts, studies, and demonstrations. These projects have reality to the research manager; bodies of knowledge too often do not. This constrained focus seems narrow to an outsider interested in determining how agency research is contributing to the intellectual capital stock or in improving communications between the research community and policy makers.

Several research agencies are making efforts to improve dissemination. These efforts include putting approved research reports into the National Technical Information Service, insisting that researchers prepare executive summaries of their work and comply with other guidelines for final reports, creating dissemination offices, requiring dissemination plans from contractors and grantees, and seeking new outlets for findings. These efforts, though in the right direction, are largely internally generated and *ad hoc*. Moreover, incipient efforts along these lines may be thwarted by agency or OMB hostility to the publication of government reports and publications, to the distribution of materials free or at subsidized prices, or to the publicizing of politically sensitive work. On the whole, dissemination does not seem to enjoy a high priority.

If this priority is to be raised, and if the focus is to be shifted away from projects toward useful knowledge, a special responsibility seems to lie with the oversight offices. In the executive branch, for example, the Domestic Council, OMB, and agency planning and policy development offices can improve the incentives to disseminate useful findings through the questions they ask of departmental and agency personnel throughout the year, through the specific interest they show in agency research, and through the criteria they use in rewarding or penalizing agencies when allocating scarce resources among research activities. As the discussion in the introduction to this volume indicated, such approaches are hardly foolproof. If continued, however, they can change the incentives facing federal research administrators in the direction of more useful, cumulatively significant work. We will return to this proposition when discussing the role of knowledge brokers.

INTERAGENCY AND INTERDEPARTMENTAL RELATIONS

Social R&D activities are fragmented and compartmentalized, both within and among departments. Even in the face of efforts such as the Federal Interagency Panel on Early Childhood Research to coordinate disparate but related activities, centrifugal forces predominate. As one participant commented, "Coordination? Who wants it?"

Because of this fragmentation, the federal government has little ability to generate systematic research on problems or issues that cut across the jurisdictions or the preferred disciplines of individual research compartments. Few attempts seem to be made to bring different offices together in a cooperative, mutually reinforcing research enterprise; even fewer succeed. Occasionally research offices from different departments have jointly funded research projects, but these are usually isolated occurrences.

Another concomitant of fragmentation is the apparent lack of overlapping research. By overlap we mean different offices interested in the same questions and disposed to use similar approaches to their study. Rumored instances of overlap usually turn out to be cases in which researchers from different professions or disciplines are studying quite different questions that have arisen under a similar policy heading. When actual or potential overlap occurs—occasionally, central grant administration offices find that they could assign a proposal to two or more research offices—some basis for differentiating and compartmentalizing the related activities seems to be found. If a basis for differentation is not found, the result seems to be bureaucratic antagonism and rivalry that is harmful rather than helpful to the knowledge production effort. It virtually never leads to scientifically useful replication or planned variation of studies.

The origins of this fragmentation in the knowledge production effort are to be found in the policy-making process. A characteristic of this process is the tendency to deal with social problems in a piecemeal rather than a comprehensive fashion. In 1976 the federal government dispensed assistance to individuals and other levels of government through more than 1,000 categorical programs. Study after study of federal programs in different social problem areas has documented fragmentation, complexity, and lack of purposeful direction. Because research is usually bureaucratically linked to mission programs, fragmented and compartmentalized operating programs produce fragmented and compartmentalized research activities.

Again, a special responsibility for overcoming the unwanted consequences of this fragmentation seems to lie with oversight offices. On the whole, oversight institutions reinforce fragmented perspectives because it is politically and bureaucratically expedient to do so. Even when oversight institutions seek to create broad interdepartmental perspectives within which to conduct policy debates and analysis, the effort seldom extends to promoting coordinated research enterprises. Busy officials at this level usually do not want to take the time and exert the effort to overcome bureaucratic obstacles to coordinated research, especially in view of their short time horizons. Such neglect, while understandable, should not be altogether excused. Oversight institutions, too, should be held accountable for their performance, and imposing broader perspectives on knowledge production should be among the criteria for this purpose.

PATTERNS OF FUNDING

Several of the social R&D agencies studied have experienced feast-and-famine cycles in their funding over the last few years. Erratic, extraordinary, and excessive increases and decreases in the financial resources available to research administrators seem to distort research management and decision making to the detriment of coherence and quality.

Increases in funding are seldom recognized as a problem, but they often are a problem. When increases exceed either the desire or the capacity of research administrators to spend them carefully, the quality and usefulness of research activities can definitely suffer. The emphasis is on spending the money quickly lest it be "lost," and the choice of problems to be researched and performers may be careless as a result. Staff resources are stretched thin to manage the new starts and to oversee the larger number of projects; the quality of supervision across the board may suffer. Many projects hastily begun become management headaches later on, and a disproportionate share of management attention is absorbed in coping with them. The availability of new money brings many new supplicants to the research manager's door, often adding to the political and bureaucratic pressures he or she must contend with. Several research administrators who had experienced or observed the consequences of unsought prosperity warned of its pitfalls.

Better known are the problems of unscheduled poverty. When funding cutbacks occur, research administrators must decide how to distribute the pain. This process is invariably controversial, usually subject to performer lobbying and conflicting pressures from advisory boards and other constituency groups, and hostage to previous commitments. Staff and performer morale and the quality of research management may deteriorate. Rather than producing a reduction of low-priority social R&D, suddenly or sharply imposed funding cutbacks may jeopardize the entire operation.

The lesson from these observations is that the budget is a relatively blunt instrument for managing the process of knowledge production and application. There are many occasions on which a blunt instrument is precisely what is wanted and needed by policy-making officials in the executive and legislative branches. There are many other occasions on which such budget manipulation can make matters worse, not better.

THE ROLE OF KNOWLEDGE BROKERS

Many participants in the social R&D Study Project have stressed the growing importance to policy making of the knowledge broker—the individual who, by virtue of his or her job or personal inclinations, facilitates the transfer of knowledge from the social R&D community to policy makers.

The management studies confirmed the importance of the brokerage function. There are strong tendencies for research administrators and the performers they support to be relatively isolated from policy making. Because they are immersed in the research enterprise, often they are unaware of the policy-making process and the needs of policy makers, wary or cynical about "politics," and unable to communicate in nontechnical terms with policy makers. Similar gulfs arise in the relationships between researchers and program operators. In several agencies there is considerable tension between program operators critical of research managers producing "eyewash" from their "hobby shops" and research administrators weary of anti-intellectual operators and their demands for how-to-do-it manuals.

Knowledge brokers can greatly assist in bridging the gap and breaking down the hostility among researchers, program managers, and policy makers. In several departments, research administrators described their ties to policy makers in terms of relationships with the knowledge brokers in the departments' planning and policy development offices. These same knowledge brokers typically were articulate about both research and policy issues, although their sympathies were clearly with policy makers. The impression created by the management studies, although hard to document, is that effective brokerage improves the substantive content of internal departmental communications and the relations between researchers and policy makers.

The transfer of knowledge from researchers to potential users is a difficult process, however. Several factors affect the ease with which the transfer takes place.

First, when there is a combination of a relatively well-defined or specific agency mission and a general consensus within the agency of the role and usefulness of research—this seems to be true to a significant extent in the Department of Agriculture, the Social Security Administration, and the Federal Highway Administration—knowledge transfer takes place most easily. Conversely, when agency missions are vague and ill defined or when policy makers and program managers have no well-developed views about whether and how research can help them—the circumstances characterizing most federal agencies—transfer is difficult and the job of the knowledge broker both more necessary and more demanding.

Second, when the values incorporated in or implied by research results are in conflict with the values prevalent among policy makers, knowledge transfer is exceptionally difficult. Indeed, researchers and administrators may avoid altogether or handle gingerly areas—for example, school busing, drug abuse, the family, cults—that promise explosive confrontations with policy makers because of latent or overt value conflicts. Value conflicts, rather than judgments about research quality or usefulness, help to explain funding cutbacks in federal offices sponsoring income maintenance and mental health research.

Third, user involvement in research planning facilitates subsequent knowledge transfer. For example, good communication between policy makers and researchers often occurs when a department's knowledge brokers are involved in formulating research agendas, framing issues, and interacting with performers. Unfortunately, other forms of user involvement have been less successful. Conferences or periodic panel meetings involving actual or potential users for research seem to fail in this regard because they do not lead to sustained communication and the benefits of close contact. The latter observation underscores the importance of knowledge brokers. They can engage in sustained communication with the research community or the sort that leads to mutual understanding and interaction.

THE INFLUENCE OF USERS AND SPONSORS

Social R&D activities are not constitutionally mandated; they must be legitimized through political and bureaucratic processes. Hence most federal research agencies are deeply and inextricably enmeshed in bureaucratic, special-interest, and legislative politics. This means that there are numerous and diverse outside pressures on research managers that heavily influence social R&D activities. These pressures emanate from such sources as departmental officials, OMB and the White House, congressional committees, and organized interest groups. Examples of these pressures and their consequences are numerous and instructive:

- Researchers in the Department of Agriculture have been caught in recent years between pressures from the secretary's office for research on nutrition, consumer services, rural development, and environmental improvement and pressures from congressional committees for continued research emphasis on farm income and production and marketing efficiency.

- The Department of Housing and Urban Development, under pressure from administration officials and Congress, shifted away from academic research by urban affairs specialists toward user-oriented research of interest to state and local officials. This shift of emphasis and the way in which it was implemented has provoked criticism that HUD research has been co-opted by special-interest groups.
- Health-related research agencies have had to respond to a variety of pressures. For example, the Alcohol, Drug Abuse, and Mental Health Administration has established research activities on rape and its prevention, the family, and television and violence in response to the interests of Congress and departmental officials. The National Center for Health Services Research has been steadily pressured by officials in HEW's offices of planning and evaluation and health and scientific affairs; for example, it found its research funds repeatedly tapped by departmental officials for health maintenance organization demonstrations.
- HUD studies of neighborhood decline and experiments with housing allowances, NICHD studies of the sudden infant death syndrome, and the handicapped children's early education program demonstrations of BEH, among many, many other social R&D activities, were initiated by Congress. In these and other cases, Congress often specifies conditions and constraints governing the research including, for example, the specification that housing allowance experiments were not to take place in areas with tight housing markets.
- University departments of agricultural economics supported by the Cooperative State Research Service exert a strong influence on the Department of Agriculture's research budget and the way that funds are administered.
- HEW officials have repeatedly sought to cancel demonstration projects that they believed represented disguised service subsidies and experiments that were failing, only to be thwarted by bureaucratic, political, and performer opposition.

From a negative perspective, such pressures make it especially difficult for research managers to engage in coherent or systematic planning of research agendas and programs. There are many masters to serve, and their interests, behavior, and reactions are often unpredictable. On the positive side, these pressures represent incentives for relevance. Federally supported social R&D could tend to be self-serving, self-perpetuating, and remote from social concerns were it not accountable to the political process.

THE FUNCTIONS OF RESEARCH MANAGEMENT

The federal research manager is ordinarily thought of as a performer of a series of administrative steps associated with carrying out a research program: helping to decide what is to be researched, selecting performers, executing instruments of financial support, monitoring work in progress, and assessing and disseminating results. The discussion in this chapter has already made clear the distinct lack of uniformity in the ways in which these steps are carried out in different agencies. The preceding section discussed some reasons for agency-to-agency differences in the character and purpose of research activities: bureaucratic, special-interest, and legislative pressures on the research manager.

Evidence of this sort leads to the conclusion that, in addition to administering research activities, the federal research manager must spend considerable time coming to terms with pressures from the "outside world." For some, this may be an easy task, either because the pressures are mild or because responding to them is personally agreeable. For others, political pressures mean unpleasant choices and compromises with personal goals or professional integrity. For all research managers, the way these pressures are dealt with have an effect ranging from significant to decisive on how and in what form their organizations survive from year to year. Thus a research manager's bureaucratic and political skills—i.e., his or her entrepreneurial ability—can be as important to the success of the research program as his or her scientific and administrative competence.

The management studies brought to light many different types of entrepreneurs. For example, some research managers who did not spend time acquiring the strong support of an influential constituency saw their programs fail, i.e., saw the achievement of their priorities become impossible because their funds dried up, unwelcome constraints were imposed on what they could do, low-priority tasks were forced on them, or they lost their jobs. Others had the support of influential constituencies—for example, industry groups or trade associations—and enjoyed stable funding and relative freedom from harassment, but at the price of intellectual distinction, policy relevance, and scientific excellence. Still others appeared nicely to balance conflicting pressures but paid a price in terms of the adherence and clarity of purpose of their research activities.

Entrepreneurship also varied in a dimension that we call personal style. Some research managers—usually those whose programs were mainly grants to universities—displayed relatively passive reliance on the performer community to shape the research effort. Others set about aggressively to formulate research priorities, dominate the performer selection process, and act as brokers for research results. The latter category includes many young individuals who considered the production of research that is visible and useful to policy makers as an important step to personal achievement. There were many cases in which personality had a significant influence on the research effort. Individuals lacking an administrative temperament and those who had trouble getting along with subordinates or key people in the political world often saw their programs suffer for just these reasons.

SOCIAL R&D MANAGEMENT: AN ANALYTIC PERSPECTIVE

The management studies have made it clear that many actors and institutions shape federally supported social R&D. It is impossible to hold any one of them accountable for the adequacies and inadequacies of the system of federal support of knowledge production. On the other hand, if changes are to be made in social R&D management, the responsibility for implementing them must be clearly assigned. Moreover, these assignments must be consistent with bureaucratic and political realities. There is no point in urging pristine management on officials whose daily regimen consists of resolving conflicts through negotiation and compromise.

In thinking about appropriate assignments, we have tended to focus on the role of federal social R&D managers. In the terms of this study, these managers are officials whose responsibilities include the direct supervision of a multiproject R&D budget. The sole responsibility of some social R&D managers is administering a social R&D budget. Others have additional responsibilities, such as policy planning, R&D project management, knowledge brokerage, and program development. These managers are important because of the role they play in all phases of social R&D administration. By focusing on the role of these managers and attempting to explain why they perform as they do, we can gain a better perspective on many of the problems that arise in federal social R&D management and on the proper locus of responsibility for solving them.

DECISION MAKING UNDER CONSTRAINTS

In administering social R&D activities, social R&D managers operate subject to a variety of constraints. These constraints are operative to some degree everywhere, although their severity varies widely from agency to agency. We discuss them under four headings: substantive, bureaucratic, political and external, and personal.

Substantive Constraints

Social R&D managers are constrained by the character of the social problems that fall within their purview. Some social problems are more intrinsically complex, less well understood, and less easily researched than others. The availability and efficacy of research methods varies among social problem areas, as do the possibilities for determining the consequences of different policy measures. Some policy areas are relatively uncharted; others have been traversed many times.

Bureaucratic Constraints

Federal departments impose a variety of internal rules and restrictions on social R&D managers. These may take the form of restrictive departmental regulations governing grant and contract administration, information requirements for budget review and approval, policies concerning internal staffing, procedures governing appointments to peer-review or advisory panels, rules for clearing publications and reports. It is through the administration of such procedural constraints that departmental officials can influence what is researched, how and by whom the research is carried out, and what happens to the results.

These "rules of the game" are especially significant because they create the most proximate incentives faced by the social R&D managers. In one instance, administration officials subtly but clearly signalled their unhappiness with an agency social R&D program by consistently failing to take action on agency nominations to its research advisory committee. In numerous other instances, budget and procurement procedures have been the primary means used to bring about the shift toward relevance and accountability that has occurred in the 1970s.

Political and External Constraints

Virtually every federal social R&D manager must contend with the views and actions of officials at OMB and the White House, key legislators, and representatives of special-interest groups. Satisfying these institutions and actors is usually important to the continued support of social R&D. As noted above, they often influence research priorities and the character and purpose of knowledge production and application activities.

Social R&D managers are often caught between conflicting views: OMB pressing for inexpensive research that yields concrete results in the short run, while performers are seeking stable, long-term funding; Congress insisting on results that can be used in the field, while executive branch officials are insisting on results that aid them in policy making; academicians demanding support for basic research to strengthen their disciplines, while other academicians demand support for applied research. The giving or withholding of support by these actors is usually important to social R&D managers. The last thing that they can afford to do is to please no one and thus have no external constituency.

Personal Constraints

The decisions and actions of social R&D managers are also constrained by a variety of personal factors. These include their professional training and experience, their personalities and administrative styles, and their capabilities as research managers. The interactions of these factors with one another and with other constraining factors can have a vital bearing on the success or failure of the social R&D enterprise.

Within these constraints, however, social R&D managers usually have at least some latitude to guide and direct social R&D activities in a deliberate manner. They make many choices that shape the research enterprise.

They can choose from among the potential agenda of problems and issues to be researched those that, for a variety of reasons, seem most suitable to their goals and interests. Even when constrained by an administrative process that is based on reaction to unsolicited proposals, social R&D managers can influence the source and substance of proposals in a variety of direct or subtle ways. Issuing priority statements and requests for applications are direct methods. Influencing the membership of study panels and project review groups is more indirect. Alternatively, social R&D managers can choose to rely almost entirely on the performer community to define the research agenda as a means of bureaucratic protection or out of genuine conviction that the performer community is the best judge of such things.

Unless they face a central administrative process that is binding, social R&D managers may be able to establish their own administrative rules. Some choose to maximize their personal discretion, avoiding altogether a systematic review process involving outsiders or even insiders. Others employ largely *ad hoc* and informal methods for soliciting ideas and choosing agendas and performers, whereas others adopt more-formal procedures.

Social R&D managers often have a choice of which constituencies to serve and how extensively to serve them. The management studies brought to light several examples of newly appointed social R&D managers who aggressively set about shifting the constituency for their offices' activities from the performer community to policy makers in the executive branch and Congress. Other managers have cultivated the "third-party" interest groups that support a department's operating programs. Still others choose to draw primary support from prestigious researchers and research institutions.

PLURALISM AND SOCIAL R&D MANAGEMENT

It is not surprising that so many of those involved in federally supported knowledge production and application are frustrated with the way in which resources are allocated and managed. Management processes typically do not operate to serve any particular set of interests exclusively. The social R&D manager must use his or her limited discretion to balance competing and shifting claims in such a way that support for his or her activities continues to be forthcoming. If resources are ample relative to claims, it may be possible to satisfy many constituencies simultaneously. If resources are scarce, however, the social R&D manager must make painful—and unscientific—choices that will inevitably be controversial.

It is also inevitable that those with a stake in social R&D will, if their dissatisfaction becomes acute enough, seek greater control over it. In the last few years, various legislators, many in the social science community, key budget and management officials, and numerous program administrators and policy makers have sought to change the rules or adjust budget levels in such a way as to make the social R&D enterprise more responsive to them. None of these attempts has succeeded if the continuity of expressed dissatisfaction is any indicator. Evidence from the management studies suggests that the net result of recent *ad hoc* attempts to reform social R&D has been to add to the constraints and sharpen the conflicts facing the social R&D administrator without producing any clear-cut improvements.

Thus we return to the theme sounded at the beginning of this study. Before further changes in the social R&D management milieu are introduced, they should be studied from an analytic perspective similar to the one we have just discussed. Can real improvements be expected, or will the changes turn into an exercise in change for its own sake? Good answers to this question will require a sophisticated grasp of the policy process affecting social R&D, toward which this volume constitutes only a beginning.

REFERENCE

Biderman, Albert D., and Sharp, Laure M. (1974) The evaluation research community: RFP readers, bidders, and winners. *Evaluation* 2(1):36-40.